

Apple's comeback challenge

Executive plan plots strategic shifts

By David Morgenstern

With an eye toward the future, Apple is firming up its new corporate strategy. Building on themes recently expressed by top management, an internal company plan reportedly creates a "strategic framework" for markets and product development.

According to sources familiar with the document, the Apple executive white paper now being circulated presents a sobering view of the company's situation, stresses value and quality for its future hardware and software

products, seeks to improve compatibility with Windows applications, and targets certain key market segments and geographical regions while "sustaining" others.

In the document, management admits that Apple has rested on its laurels. "We must stop taking for granted that our products excel in ease of use, especially in an era when the competition has made enormous strides in this same direction," said a source quoting from the plan.

See Strategy, Page 76

New COO Landi turns spotlight on user value

By Stephen Howard

Apple's new front man is Marco Landi, chief operating officer — ex-semiconductor and consumer-electronics manager for Texas Instruments Inc. in Europe and Asia, and, once upon a time, a shoe salesman in his native Italy.

Landi, 51, spoke to MacWEEK recently about his plans to restore Apple's fortunes while instilling a sense of business discipline in the company. Landi said his first priority is to inspire Apple employees to deliver "distinctively superior user value."

DSUV is Apple's new catch phrase. It represents Landi's goal of developing technology and services around Apple's trademark ease of use. By concentrating on DSUV, Landi said, Apple can re-

See Landi, Page 76

Navigator 4.0 racing to beta

By James Staten

Netscape Communications Corp. is readying a major new offensive in the Web browser wars, and the company is arming Navigator for groupware development.

While the Mountain View, Calif.-based company is finalizing Navigator 3.0, a parallel development team is working on Version 4.0, which reportedly

will enter public beta testing in September or October — just months after the final release of 3.0 (see story, Page 78).

The final Navigator 4.0 is scheduled to ship in the first half of 1997. According to sources, the focus of this release will be enabling technologies for intranet groupware. Netscape reportedly

See Netscape, Page 78

Mathematica 3.0 to get new interface, functions

By Leander Kahney

Wolfram Research Inc. will shortly release Mathematica 3.0, the first major revision of the technical computing environment in three years.

Version 3.0 of the cross-platform

software will boast a major overhaul of the interface, expanded computational abilities and significant performance improvements, the company said.

The software is currently in final beta testing and should be released by August. "It all depends on the [test] results," said Stephen Wolfram, the company's president and CEO.

"It's a vast improvement," said beta tester David Warner, president of Principia Consulting, a Boulder, Colo.-based computer consultancy. "It has always had an advanced kernel — now it has got an advanced front end, too. It makes using Mathematica a lot easier."

A significant interface See Mathematica, Page 78



Mathematica 3.0 will let users create palettes of buttons for commonly used functions.

Mariner on course for productivity market

Word processor slated for August

By James Staten

Just when Microsoft Corp. and Claris Corp. thought they had sewn up the Mac productivity-software market in the United States, a new competitor from Japan comes to challenge their domination.

Mariner Software Inc. said it plans to ship a U.S. version of its word processor in August and release a companion spreadsheet by year-end. The upcoming Mariner Write has been sold as Pascal Write in Japan since January.

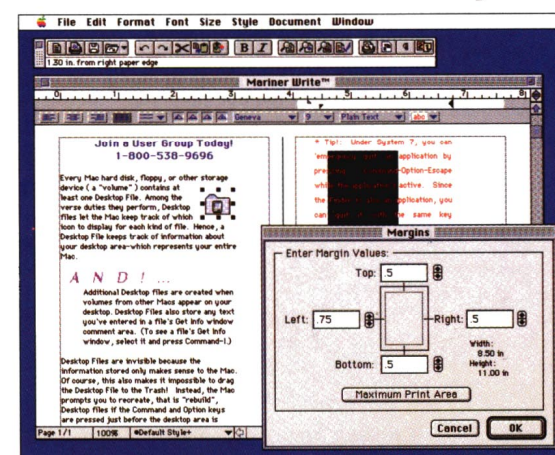
The company said Mariner Write, priced at \$69.95, will provide robust functions without taxing system resources. Mariner

Write will require only 1.2 Mbytes of RAM on a 680x0 Mac and 1.8 Mbytes on a Power Mac, according to the company, and about the same space on a hard disk.

The U.S. version will be aimed at the small-office, home-office

and education markets. It will provide ruler and formatting controls, style sheets, 10 levels of undo, kerning, line and page numbering, support for inserted graphics, document statistics, and thumbnail views.

See Mariner, Page 80



Aimed at the SOHO and education markets, Mariner Write will feature an intuitive interface. The program will also include extensive Apple Guide help.



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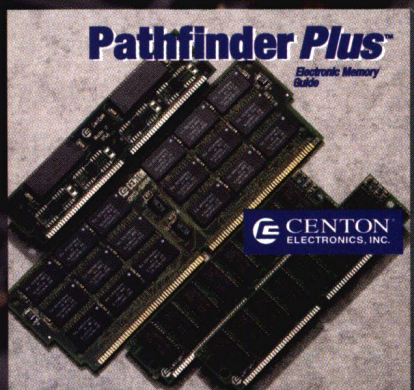
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AT DEADLINE

ARA Version 2.1 update available online for real

Apple last month delayed the online availability of Version 2.1 of Apple Remote Access, citing what it called an "engineering resources" problem. The company said the free update should be available through most of Apple's online software resources, including ftp.info.apple.com.

Apple said the update has been available from Claris Corp. since its June 18 announcement but that production of the on-line updater took longer than expected.

Contrary to a story in the June 17 issue (Page 74), the PCI version of the Apple Remote Access MultiPort Server supports up to 16 serial ports at ISDN speeds. □

Adobe hands off Fetch; Extensis to lower price

Ending months of speculation about the future of Fetch, Adobe Systems Inc. last week tossed its multimedia database over the fence to Extensis Corp.

While both companies declined to disclose details of the deal, Portland, Ore.-based Extensis will take over development, marketing, sales and support for the software, which will bear the name Extensis Fetch. Extensis said the package will be available for an estimated street price of \$99.95; Adobe currently offers the software for \$149.

Fetch will be the first stand-alone application available from Extensis, which develops and distributes a variety of plug-in software for Adobe PageMaker, Photoshop and Illustrator; Macromedia FreeHand; and QuarkXPress.

"Adobe is focusing more on larger-scale applications, and Fetch represents a different business model," said Kerri McConnell, product marketing manager with Mountain View, Calif.-based Adobe.

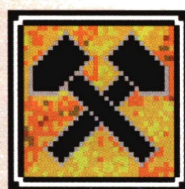
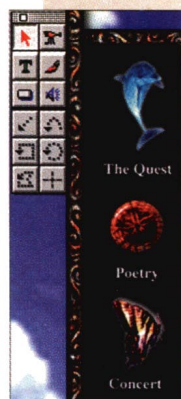
Adobe acquired Fetch when the company purchased Aldus Corp. of Seattle in August 1994. □

STF flying high after Pleiades acquisition

STF Technologies Inc. last week acquired Pleiades Research Corp., a maker of voice-mail software. Blue Springs, Mo.-based STF, a developer of Mac fax software, said it would integrate Pleiades technology into STF products.

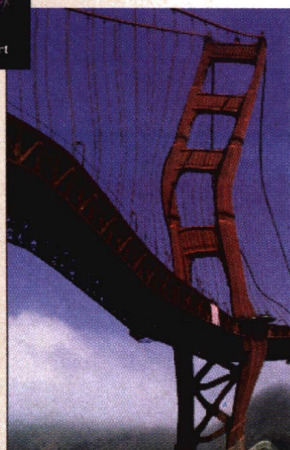
W. Rick Wyand, STF president and CEO, said the company plans to release an integrated package with voice, fax and data capabilities in the future. "Combine that with STF, and I think we've got some synergy," he said.

STF will sell Pleiades' \$299 Front Office voice-mail software. It will retain Pleiades' Los Angeles offices and said it plans no layoffs. Both companies are privately held, and terms of the acquisition were not disclosed. □



FWB's Hard Disk ToolKit gets a make over. See News, Page 4.

MovieWorks now runs native on Power Macs and includes a video-editing module. See GA, Page 12.



MovieFlo' rates high on the "How'd they do that?" scale. See Reviews, Page 35.



The cause and prevention of serial-port problems. See MacInTouch, Page 41.

MacWEEK

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THE NEWS DAILY FOR THE MACINTOSH MARKET

Online exclusives

The developers at this year's MacHack conference hammered out their ritual wish list for Apple, and, in his Reporter's Notebook, Clifford Colby chronicles Dave Winer's call to arms and the amazing PowerBreakfast-Book. ... MacWEEK was dark for a week, but the shark-like Knife wasn't sleeping. The latest gossip is featured in an exclusive online column. ... Opinion Page Editor Mark Hall goes Off the Record to spell out why Microsoft and Netscape need Apple. ... The Fast Ethernet debate rages on in the Reviews Forum.

MacWEEK Insider

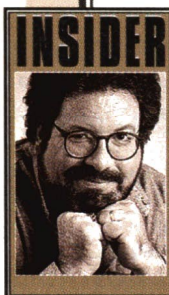
News Editor David Morgenstern is on the trail of multiplatform computing. Reports indicate Apple is re-evaluating the technical, cultural and bottom-line implications of running Microsoft Windows applications on Macs. Why? Because users just want to run software.

Where to find us online

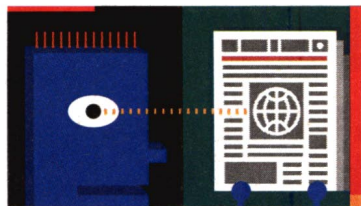
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THIS WEEK ONLINE

Running Windows apps
Hactoids at the movies
All-electric Knife
Who needs Apple?



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NEWS

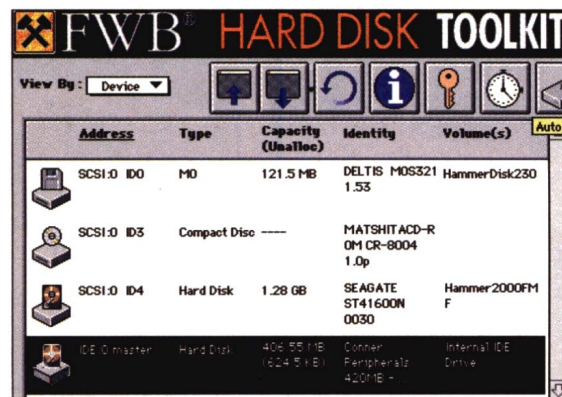
OUTFOXED

Microsoft said the Power Mac version of its Visual FoxPro relational database system will ship in mid-July.

PAGE 4

Mac OS • Productivity • Peripherals

07.08.96 MACWEEK



FWB's Hard Disk Toolkit 2.0 utility lets users test, format and partition a drive with a single command.

FWB retools storage utility

By David Morgenstern

FWB Inc. recently dressed up its popular hard disk utility with a new streamlined interface, automatic functions and support for Enhanced IDE drives. The company also released an update to its CD-ROM driver package.

Version 2.0 of FWB's \$199.95 Hard Disk ToolKit sports four modules, pared down from previous versions' eight. It also comes with Crisis Tools, a smaller version that fits on a floppy disk.

Unlike the multiple-operation approach in earlier versions, the new version can format, partition and name a drive in a single step. Users can also format hard drives and slower removable media in the background as well as format several drives simultaneously.

In addition, Version 2.0 comes with settings optimized for publishing and video applications. The settings support 42 mechanisms from Conner Peripherals Inc., Micropolis Corp., Quantum Corp. and Seagate Technology Inc.

The utility now lets users format and manage Enhanced IDE (Integrated Drive Electronics) mechanisms, used in some notebooks and Macintosh Performa models. It also boosts cross-platform support by placing both E-IDE and SCSI drivers on 3.5-inch magneto-optical cartridges, FWB said.

The update costs \$49 for users of previous versions or Hard Disk ToolKit Personal Edition.

The company also recently added autoloader support to its \$99 CD-ROM ToolKit. Version 2.1 works with changers based on Nakamichi America Corp.'s seven-disc models, NEC Technologies Inc.'s seven-disc player and Pioneer New Media Technologies Inc.'s six-disc unit. The update is \$39.

Updates for both products are available at (800) 581-4392.

FWB Inc. of Menlo Park, Calif., is at (415) 833-4616; fax (415) 833-4655; sales@fwb.com; http://www.fwb.com. □

System 7.5.3 hits retail shelves

By Clifford Colby

Apple last week released the retail version of System 7.5.3, the latest version of the Mac OS.

Apple said the package, which is distributed by Claris Corp., carries an estimated street price of \$99.

System 7.5.3 rolls into one release everything found in previous versions of System 7.5, in-

cluding the recent System 7.5 Update 2.0 and System 7.5.3 Revision 2.0 (see 06.10.96, Page 4, and 03.11.96, Page 14).

Apple said the release rectifies the disparity among 680x0-based machines and NuBus- and PCI-based Power Macs. System 7.5.3 lets administrators create a univer-

See Mac OS, Page 6

Apple's ads target key businesses

By Leander Kahney

Apple will soon release the next two pieces of its current business advertising campaign.

The multimillion-dollar four-part campaign, designed by the Los Angeles ad agency BBDO West, began in early June and targets Apple's four key business markets: small business, science and engineering, publishing and media, and enterprise.

Apple's next ads — expected to debut before the end of the month — will feature designer David Carson, who was responsible for a string of influential print ads and design director for Raygun magazine. The enterprise ad will focus on Tom Laflaur, vice president of engineering at San Diego-based Qualcomm Inc., maker of Eudora e-mail software.

Pundits have praised the first two ads in the series for centering on Apple's key markets. The first, focusing on small business, featured Jim McCann, president of 1-800-Flowers. The science and engineering ad highlighted Warren Hehre, president and CEO of

See Apple ads, Page 6

Microsoft, Apple to 'empower' users

Empowerment Pack includes Internet tools

By John Poultney

"Apple and Microsoft don't often show up in the same room without a judge," said Dave Meltzer, Microsoft Corp.'s group product manager for Macintosh applications. Yet Meltzer and Jim Gable, Apple's vice president of marketing for the AppleSoft division, did just that to discuss the Microsoft Empowerment Pack for Macintosh software bundle.

The Empowerment Pack is a free collection of Microsoft and Apple utilities and updates designed to enhance the Internet capabilities of Microsoft productivity applications and to provide Mac users with the latest system software. The package includes Microsoft's Internet Explorer 2.0 Web browser; Internet Assistant 2.0 for Word and Internet Assistant for Excel, both HTML-conversion tools for Web publishing; Microsoft Word 6.0.1a

Update; Apple's System 7.5 Update 2.0 and System 7.5.3 Revision 2.0, the two latest system updates (see story, this page); and an offer from memory vendor Kingston Technology Corp. of Fountain Valley, Calif., for 8 Mbytes of RAM for \$69.

Meltzer and Gable said they view the collaboration as beneficial because the improvements are targeted at mutual customers. "There's no rule to stop helping," Gable said, explaining that Apple is assisting Microsoft in bringing portions of its OLE technology to the Mac side. "We're working toward interoperability."

Gable also noted that the system update benefits all users. "The manner in which we've named and delivered the updates has been somewhat confusing," he said, "but we really feel that System 7.5.3 is the way to go for most users. It fixes problems, it improves performance, it's a universal release, it boots faster, and most importantly, it works."

For Microsoft's part, the Empowerment Pack fits into the company's strategy of stretching

See Microsoft, Page 6

B.C. Software's Final Draft 4.0 fades in

By John Poultney

B.C. Software Inc. is now shipping the latest installment of its Final Draft script writing program.

The \$249 specialized word processing application assists film, stage and television scriptwriters in keeping tabs on such story elements as dialog, action, characters

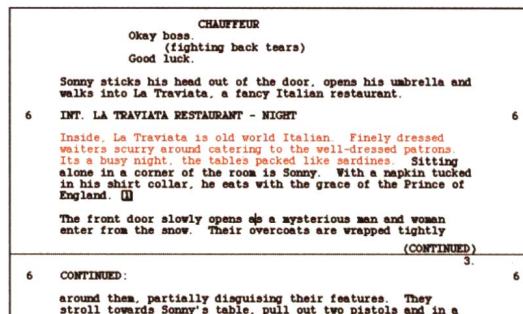
and transitions, and it allows users to tailor scripts for industry-standard screenplay, stageplay and television sitcom formats.

The software is Power Mac-native with Version 4.0 and includes improved formatting capabilities for dialog, settings and action. Final Draft can import files from other word processing applications, the company said, and will ask users how they want to format text.

B.C. Software said the update includes new text styles, a beefed-up spelling checker and thesaurus, multiple levels of undo, and drag-and-drop capabilities. The update also lets writers include notes in the script and print them separately. The new Mac version of Final Draft is also now compatible with its Windows counterpart, improving cross-platform collaboration, the company said.

Los Angeles-based screenwriter Darryl Quarles said, "Final Draft 4.0 accurately converts files from my partner, who has a Windows machine. All the formatting and script notes are retained."

B.C. Software Inc. of Los Angeles can be reached at (310) 636-4711 or (800) 231-4055; fax (310) 636-4688.



All the important elements of script writing — centering, indentations, pagination, transitions and character lists — are handled automatically with Final Draft.



Road Kill.

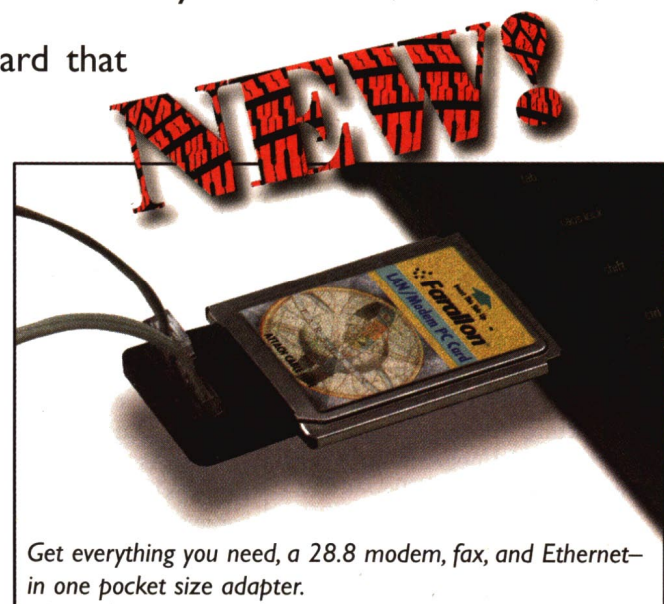


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MacHack's new wish list

By Clifford Colby

Dearborn, Mich. — Attendees of this year's MacHack conference again produced a list of what they consider to be significant issues and concerns about the Mac platform.

The 11th-annual MacHack, billed as a technical conference for leading-edge developers, drew close to 300 of the Mac industry's sharpest engineers last week. And for the second year, the hackers produced a wish list, which was a distillation of the conference's marathon Bash Apple session.

The top request was for Apple to encourage academic and hobby developers. The group requested that Apple view colleges and universities as training grounds and support students with systems, tools and documentation.

Next, the group asked Apple to use a straightforward version-numbering scheme and assign each new system software component a higher number.

Also on the list: that Apple provide in System 7 APIs from Mac OS 8. Attendees said that the backwardly compatible APIs would ease the transition to Apple's next operating system.

The group repeated a request from last year: Let developers purchase high-end machines at less-than-market prices.

Developers at the conference asked Apple to improve the quality of its hardware. Attendees also said they appreciated Game Sprockets, a new suite of game APIs, and

asked for Sprockets for such things as communications, text, Apple events and the Internet.

Attendees said giving users the option of installing essential resources discouraged adoption, and they asked that Apple increase the installed base of key new Apple technologies. They also said that one of the barriers to adoption of new technologies is bad APIs and asked Apple to improve the quality of APIs across the board.

Next on the list was a request for Apple to give developers access to Radar, the company's internal system for tracking bugs.

The developers asked Apple to revive its Cool Tools awards, which were given to developers and their Internet tools.

Attendees requested that Apple

recognize and reward developers who do Mac-first and Mac-only development. Another request was from Pascal users, who asked Apple to give them Pascal APIs.

Finally, conferees said Apple should drive the adoption of its technologies by delivering them across platforms.

"The MacHack group represents a tremendous amount of industry knowledge and Macintosh experience. Apple would be foolish not to hear their thoughts," said Heidi Roizen, Apple vice president of developer relations. "I'm committed to working through their list and finding as many good solutions as possible, clarifying the issues, and taking their ideas inside Apple where they can help us build a better course of action." □

Apple ads

From Page 4

Wavefunction Inc., developer of MacSpartan Power Mac molecular modeling software.

"They're unlikely to sweep the awards, but they'll likely move boxes," said Bradley Johnson, technology editor and columnist at Advertising Age of Los Angeles.

"[Apple] is no longer trying to be all things to all people, which is a good strategy," Johnson said.

"Hallelujah," said Geoff O'Brian, senior editor at Market-

ing Computers, a monthly trade magazine published in New York. "Apple has been scared of being labeled a niche player for so long they've neglected their strongest customers."

Sheila Craven, president of the high-tech ad tracking agency ADscope Inc. in Eugene, Ore., agreed. "Apple should be focusing on solutions for business in markets where they have been successful and already have a foothold," she said. "I think this is their best strategy." □

Microsoft

From Page 4

the Internet over its user base (see story, below). "We're totally focused on making desktop applications a natural extension of the Internet experience," Meltzer said.

The Empowerment Pack, to be delivered on CD-ROM, will

be mailed this month free of charge to registered users of Microsoft Office 4.2, Word 6.x, Excel 5.x and PowerPoint 4.x. Office 3.0 users will receive a mail-in card to claim the package.

Microsoft Corp. of Redmond, Wash., is at (206) 882-8080 or (800) 426-9400; fax (716) 873-0906; <http://www.microsoft.com>. □

Microsoft's Internet add-ons

Included in Microsoft Corp.'s Empowerment Pack for Macintosh are applications that help users work with the Internet.

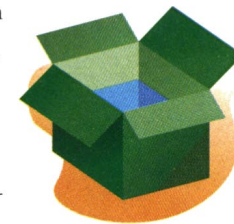
Along with the company's Internet Explorer Web browser, Microsoft is bundling Internet Assistant add-ons for Excel and Word that provide automated methods for converting documents to HTML. Microsoft said the add-ons let users bypass the coding process and create documents that support all common

HTML tags as well as a few that are specific to Explorer — such as for embedded video, sound, watermarks and marquee text.

Microsoft said the Internet Assistant add-ons work within Word 6 and Excel 5, so users can format documents in a familiar environment. Excel users can export tables directly into HTML documents and specify placement within the page as well as background color and text formatting. — By John Poultnery

STORAGE BEAT

Tahoe climbs higher. Users on the go can look forward to Pinnacle Micro Inc.'s Tahoe 640, a portable 3.5-inch magneto-optical drive with a 640-Mbyte capacity. The first drive of its kind announced for the U.S. market, it is expected in the third quarter.



The high-capacity drive will cost \$799; cartridges will be \$69. It will have an average seek time of 28 milliseconds and a top data transfer rate of 3.3 Mbytes per second, Pinnacle said. It will also support older 230- and 128-Mbyte cartridges.

Users will be able to add a \$99 kit with carrying case and a battery pack that offers 3.5 hours of power, the company said.

In addition, Pinnacle recently released Vertex, its 5.25-inch MO drive with a 2.6-Gbyte capacity. Available as an external or internal model for \$1,695, the drive features a maximum data transfer rate of 4.3 Mbytes per second, Pinnacle said. The drive comes with an Adaptec SCSI PCI card and a cartridge. Phone (714) 789-3000 or (800) 553-7070; fax (714) 789-3150; <http://www.pinnaclemicro.com>.

Extreme storage. Mediastore of Orange, Calif., recently shipped its Extreme drive, which combines Iomega Jaz and CD-Recordable mechanisms. Aimed at backup and authoring applications, Extreme costs \$1,299 with a Yamaha double-speed read-write CD-R 100 mechanism; a \$1,699 version incorporating a Sony 920S drive offers 2x writes and quadruple-speed reads. The package ships with Surf City Software Inc.'s Lido 7 formatting utility. Phone (714) 974-5551 or (800) 555-5551; fax (714) 279-1690; <http://www.mediastore.com>.

APS cuts CD-R costs. APS Technologies Inc. of Kansas City, Mo., recently cut the price of its APS CD-R system by more than \$200. The recorder, now \$599.95, reads and writes at double speed. It comes with CharisMac Engineering Inc.'s Discribe 1.0 mastering software (see 12.11.95, Page 4). Phone (816) 920-4109 or (800) 235-2753; fax (816) 483-3077; sales@apstech.com; <http://www.apstech.com/>.

PD jukeboxes. Panasonic Computer Peripheral Co. of Secaucus, N.J., this month will ship PD/CD-ROM Libraries, a new line of autochangers with Phase-change Dual drives. The drives can read CD-ROMs at quadruple speed and rewritable PD optical discs housed in 10-disc magazines. The \$9,995 LF-J100A will hold up to 100 discs and up to four drives. In August, Panasonic will release its 50-disc LF-J50A, priced at \$5,995; the unit will support up to two drives. Phone (201) 348-7000 or (800) 742-8086; fax (201) 392-4792; <http://www.panasonic.com>.

Put another MO in the jukebox, baby. Maxoptix Corp. recently shipped new jukeboxes based on 2.6-Gbyte 5.25-inch magneto-optical drives. The MX family comes in capacities from 52 to 670 Gbytes, starting with the 20-slot 52XT model at \$5,995. The top-of-the-line 258-slot model uses six drives and costs \$60,995. Phone (510) 353-9700 or (800) 848-3092; fax (510) 353-1845; <http://www.maxoptix.com>.

— By John Poultnery

Mac OS

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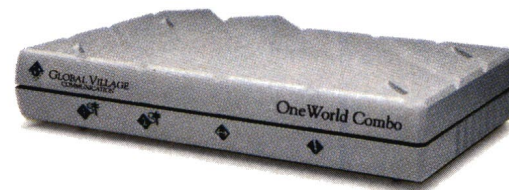
sal system that can start up all models dating back to the Mac Plus.

The retail package comes with Version 8.3.4 of the LaserWriter driver as well as CD-Setup 5.1.7, which includes support for six- and eight-speed CD-ROM drives. Bundled with the system software is Apple's Internet Connection Kit, which comes with tools for e-mail, Usenet news, Telnet terminal emulation, FTP file transfers and the Web.

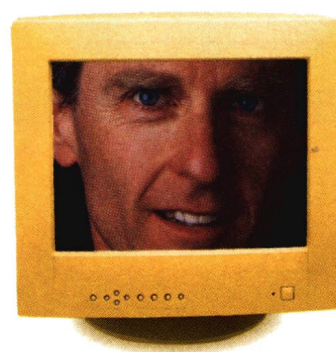
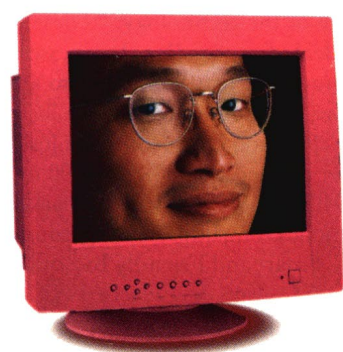
The package is available on floppy disks or a CD-ROM. The CD-ROM of the retail package includes Version 1.0.4 of OpenDoc, Apple's software component architecture. System 7.5 users can purchase the upgrade for \$49 by calling Claris.

Claris Corp. of Santa Clara, Calif., can be reached at (408) 727-8227 or (800) 293-6617; <http://www.claris.com>. □

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Apple stock sinks to 10-year low

By Leander Kahney

Apple's stock price dropped to its lowest in a decade the last week of June.

The price of Apple's stock, which has dropped steadily since last fall, when it hovered above \$40 per share, hit \$19.88

June 26, its lowest since Nov. 24, 1986, when it was \$19 per share.

"It's pretty miserable ... these are not rosy times for Apple," said Pieter Hartsook, publisher of The Hartsook Letter in Alameda, Calif. "But it's a real opportunity for someone to make a lot of money: Buy it now at 19 and sell it next year for 40." Noting that Apple's stock went nearly as low in both 1993 and 1994, only to recover, he added, "It's a bargain."

Daniel Kunstler, senior equity analyst at San Francisco-based J.P. Morgan Securities Inc., said, "NASDAQ dropped very heavily — 19 points [June 26] — and Apple took a beating."

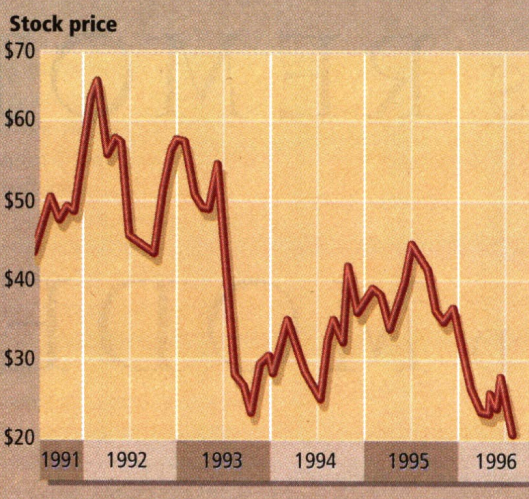
"It's a brutal market, and it's being particularly blunt with Apple. ... It's just that they are getting disproportionately hammered," Kunstler said.

Hartsook and Kunstler agreed that Apple's fortunes will likely change for the better, but neither would predict when.

"I'm cautiously optimistic about their prospects," Hartsook said. "They've got the right team, and they've got an organizational structure and a game plan that could be successful."

Kunstler agreed: "I believe the Apple

Apple's 5-year average stock price



business model can work. They have 22 million users, they have a franchise — and a loyal one. ... They can survive."

But Jim Meyer, director of research at Philadelphia brokerage company Janney Montgomery Scott Inc., suggested Apple start competing in the Intel-standard PC market. "They need to build a box that runs on an Intel chip and runs Windows 95 and NT," he said. "Why sacrifice 93 percent of the [PC] market protecting 7 percent? It shouldn't be hard to develop a new machine based on industry standards." □

Vendors write lower prices for CD-R drives

By John Poultney

Two vendors have turned up the heat in the CD-Recordable market with new drives and lower prices.

► **Plasmon Data Inc.** this week will release Afterburner 4240, which will cost \$699 and \$769 for internal and external models, respectively.

The drive is a double-speed writer and quadruple-speed reader. It will come with Adaptec Inc.'s Easy-CD Pro authoring software.

► **Smart and Friendly Inc.** recently shipped its CD-R 1002/Toast, which features a 2x read-write drive and Astarte GmbH's Toast Pro 3.0 CD-ROM authoring software (see 06.10.96, Page 8).

Smart and Friendly also offers its CD-R 1002/MM, a \$779 bundle aimed at multimedia authoring that includes Toast and Director 4.0, Macromedia Inc.'s multimedia authoring package.

"CD-R is becoming a viable alternative to DAT in the backup and archiving market," said Bill Frank, president of market-research company Augur Vision Inc. of Los Altos, Calif. He said that CD-R's increased reliability, lower prices and improved software have boosted the popularity of the technology. "These devices are ideal for smaller businesses, such as graphic artists, who need to archive various iterations of their work."

Plasmon Data Inc. of San Jose, Calif., can be reached at (408) 474-0100 or (800) 445-9400; fax (408) 474-0111; marketing@plasmonca.com; http://www.plasmon.com.

Smart and Friendly Inc. of Chatsworth, Calif., can be reached at (818) 772-8001; fax (818) 772-2888; http://www.smartandfriendly.com. □

Adaptec readies Remus redux

By John Poultney

Adaptec Inc. will unveil the latest iterations of its Remus and Remus Lite RAID software at August's Macworld Expo in Boston. The free update will fix bugs, let users create larger arrays and improve support for high-performance RAID systems.

Version 1.4 of \$449 Remus and \$295 Remus Lite will increase the current 4-Gbyte partition limit to 2 terabytes on PCI-based Macs. Remus Lite supports RAID levels 0 and 1; Remus adds levels 4 and 5.

In addition, the update will identify volumes on removable drive modules and automatically mount them. Adaptec said Remus 1.4 will also include boot-block repair and patches for Apple's SCSI Manager; these fixes were previously available only through technical support.

In other news, Adaptec has been on a buying spree. The \$650 million company in June bought Corel Corp.'s CD Creator authoring software and Cogent Data Technologies Inc., a developer of Fast Ethernet cards. In 1995, Adaptec bought Incat Software Systems Inc., maker of the Easy CD Pro authoring software.

Adaptec Inc. of Milpitas, Calif., is at (408) 945-8600 or (800) 959-7274; fax-back (408) 957-7150; http://www.adaptec.com. □

Gentia 3.0 gains new OLAP server

By Clifford Colby

Planning Sciences Inc. last month shipped an update to Gentia, its high-end suite of client-server software.

With Gentia's cross-platform database-analysis tools, developers can set up an OLAP (online analytical processing) system, allowing users to drill down through data and extract summary information.

Gentia 3.0 includes the company's new GentiaDB OLAP database server. According to the company, GentiaDB manages individual OLAP databases and includes tools for extracting and setting up the information Gentia clients use.

Gentia comes with tools for building client applications, and Version 3.0 includes the company's new Report Builder for creating reports based on the results of database analysis.

Pricing for the system ranges from \$82,500 for a 25-user license to \$209,000 for 100 users. Planning Sciences has Gentia clients for Mac; Windows 3.1, 95 and NT; OS/2; X Window; Unix; and NeXT machines. Gentia runs on Windows NT, Novell NetWare, OS/2, Unix and NeXT servers.

Planning Sciences Inc. of Westborough, Mass., is at (508) 898-9510 or (888) 443-6842; fax (508) 898-9511; http://www.gentia.com. □

NiMH battery for PBs lasts 30 percent longer

Battery Technology Inc. shipped at the end of June the MC-4000, a nickel-metal-hydride battery for the PowerBook 100 series.

The \$119.95 battery will last 30 percent longer than the nickel-cadmium batteries that come standard in those PowerBooks, according to Andy Tong, BTI vice president of production.

The MC-4000 will last three to four hours for monochrome PowerBooks, and it will power color systems for one and a half to two hours.

Tong said the MC-4000 includes a thermostat and a thermofuse; the latter, he said, protects the battery from overheating.

Battery Technology Inc. of Commerce, Calif., can be reached at (213) 728-7874 or (800) 982-8284; fax (213) 728-7996. □

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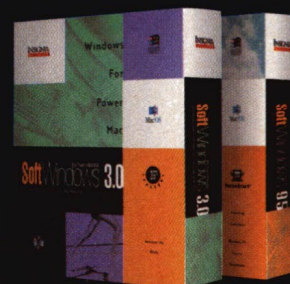
SoftWindows 3.0 costs roughly \$299. Apple's DOS Compatibility Card, about \$749. Plus another ten bucks or so for the screwdriver you'll need to install it.

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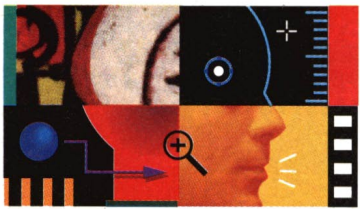


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PLUGGED INTO PCI

Truevision has shipped the Targa 2000 RTX, the company's PCI-based video-capture and playback board.

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Graphics Applications • Publishing • Multimedia

07.08.96 MACWEEK

Radius hits a double

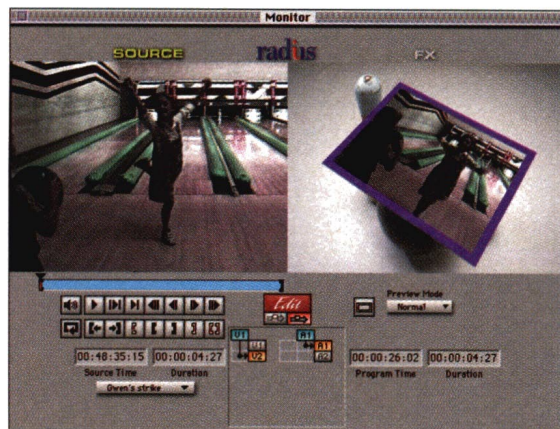
Ships PCI card, video-app update

By Kelly Ryer

While weathering bad fortune in recent months over its failed clone business, Radius has been hard at work on its two key digital-video products, Video-Vision PCI and Radius Edit 2.0.

The hardware-software combo, which shipped in June with an array of bundled third-party software, forms Radius' latest QuickTime-based nonlinear video-editing system.

The long-awaited PCI version of Radius' lower-end Video-Vision system costs \$3,999. According to Radius, the single card features a faster encoder that can capture and output full-frame, full-motion composite or S-video



Spare interface: Radius Edit 2.0 has separate monitor windows for video and effects. New effects include Pan Zoom Rotate and chroma keying.

at data rates of 6.3 Mbytes per second and compression ratios of 3-to-1. An on-board digital signal processor adds two channels of 16-bit stereo sound. Audio data can be synchronized to the video clock and stored along with the video.

A new player utility called Studio Player 2.6 enhances the sys-

tem's playback capability, Radius said. The free utility will soon be available for downloading from the company's Web site.

Like Radius' \$6,399 NuBus-based Telecast board, VideoVision PCI includes a convolution filter, which allows an NTSC or PAL (European) monitor to act as a sec-

See Radius, Page 14

Microsoft and Apple: No media integration

But détente may spur new talks

By Kelly Ryer

Apple and Microsoft Corp. moved to quell rumors that they are integrating their multimedia efforts.

The two companies told MacWEEK that they are hard at work refining their own disparate interactive media technologies, which are both scheduled to appear within the next month.

Contrary to reports published in the June 24 issue of InfoWorld, representatives from Microsoft

and Apple denied that discussions are under way to combine elements of Apple's QuickTime technology and Microsoft's competing ActiveMovie.

"There are no formal agreements, but we'd welcome the opportunity," said Carlos Montalvo, director of Apple's Interactive Media Group. Montalvo added that interactive media, along with Internet technology and software bundling, is "one place where we've got complementary technologies and strategies. It's a place we could add value should Microsoft choose to do so" (see story, Page 4).

See QuickTime, Page 14



Via MovieWorks Interactive 3.0's Component module, users can assemble interactive QuickTime presentations containing video, text, 16-bit sound and 24-bit-color graphics.



MovieWorks sequel runs faster, does video

By Matthew Rothenberg

Interactive Solutions Inc. in June delivered a sequel to MovieWorks, the company's low-cost, QuickTime-based suite of multimedia-authoring software.

MovieWorks Interactive 3.0, priced at \$129.95, is Power Mac-native, allowing it to run up to three times faster on Power Macs than Version 2, Interactive Solutions said.

In addition, the new version features a video-editing module that lets AV Macs or models

equipped with a third-party digitizing card capture, digitize and edit video sequences.

Like earlier versions of the software, MovieWorks Interactive 3.0 lets users create multimedia scenes and then save them in QuickTime format. Scenes can be linked into sequences or interactive presentations.

Besides the new video application, MovieWorks includes modules for generating anti-aliased text; eight-bit sound; and full-

See MovieWorks, Page 14

OptiCal makes screen debut

By Matthew Rothenberg

Mac users with an eye for color accuracy can now look to OptiCal, a new monitor-calibration system from The Color Partnership that shipped last week.

The complete OptiCal package comprises software as well as the OptiMate Monitor Sensor, a version of the colorimeter that ships with Radius Inc.'s PressView monitors, the company said.

The software works with any Mac application or monitor configuration, the company said, and generates ICC (International Color Consortium) device profiles via ColorSync 2.0, Apple's set of system-level color-matching extensions.

According to The Color Partnership, the software lets users calibrate displays to Cineon standards for film, NTSC video signals or SWOP (Specifications for Web Offset Publications) settings for print. Users can also standardize colors on all their monitors and create custom ICC target files for

See OptiCal, Page 14

HoloDozo adds texture to 3-D

By Kelly Ryer

German developer M.M.M Software takes 3-D very seriously.

Last week the company released HoloDozo, a \$149.99 set of 28 Adobe Photoshop plug-ins that map textures onto different 3-D shapes. The software uses Apple's QuickDraw 3D technology extensively, even when it comes to drawing the plug-ins' interface.

To use the plug-ins, users manipulate yellow bars that stick out of a 3-D box called the HoloCube. The bars can adjust ambient light, spot light, fill light, zooming, squeezing and clipping. The 28 available objects, each with its own plug-in, range from basic shapes such as the HoloBox, HoloSphere and HoloBagel to the more-complex HoloFizz, HoloPasta and HoloUfo.

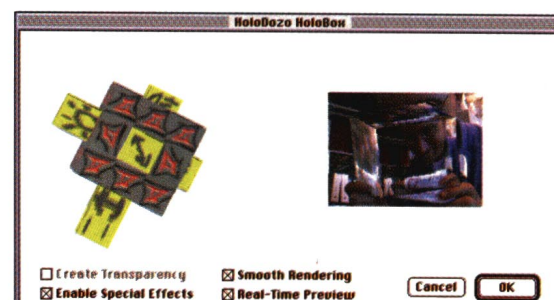
HoloDozo requires QuickDraw 3D and a Power Mac. It supports transparency and hardware acceleration from QuickDraw 3D accelerator boards.

The HoloDozo modules also work with Adobe Premiere and Macromedia Director as well as other applications that access Photoshop plug-ins. Premiere and Director users can animate the effects over time, M.M.M said.

The company said it plans to support 3DMF (3-D metafile format) in future releases, and it also plans to ship a version of HoloDozo for Adobe After Effects later this year.

Users can purchase HoloDozo through the Adobe Plug-in Source at (800) 685-3547 or the World-Wide Power Co. at (800) 940-8737.

M.M.M Software of Hanover, Germany, is at (49) 172-543-6669; fax (49) 172-541-8634; holodozo@mmsoft.com; http://www.mmsoft.com.



To use HoloDozo's unique 3-D interface, users rotate the 3-D cube and push or pull on the various controls.

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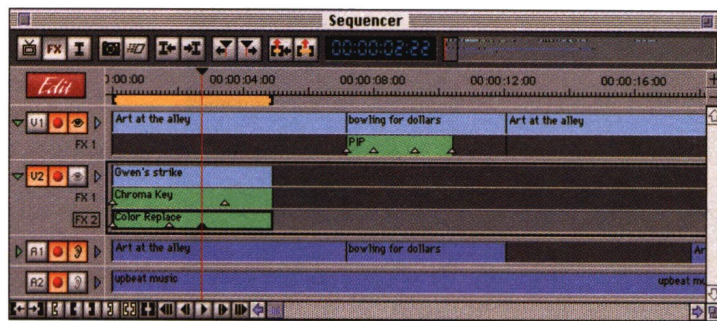
From Page 12

ond Mac screen and helps to record flicker-free video directly to tape, according to Radius.

The VideoVision PCI board is bundled with several applications: Radius' SoftStudio software compressor-decompressor; Radius Edit 2.0; Adobe After Effects 3.0; DiskExpress, ALSoft Inc.'s disk-optimization software; and a two-user license for Emotion Inc.'s Creative Partner.

On the software front, the company rolled out Radius Edit 2.0. Besides the standard dissolves, fades, zooms, and other color-adjustment and motion effects, the new version adds Pan Zoom Rotate controls and three types of chroma keying: chroma key, luma key and color replace. Users can create their own effects and save them as FX Templates.

Version 2.0 supports unlimited video layers and offers multiple bins for storing media, in addition to SMPTE time-coded readouts and support for dual monitors. Real-time previews of video effects can be played at "proxy quality." In an echo of Adobe Premiere, the upgrade's new batch-redigitizing feature lets users work on low-quality sequences, then redigitize a high-quality version, trimming



Radius Edit 2.0's sequencing window has separate time lines for audio and video elements. Multiple tracks can be trimmed at the same time.

just the parts of the original video that were used. Multiple tracks can be trimmed at once.

For audio editing, Radius Edit 2.0 supports up to 20 stereo or mono audio tracks and features rubber-band controls for volume adjustments. Audio transitions can be saved and reused, and up to six tracks of audio can be played back in real time, Radius said.

Like the previous version, Radius Edit 2.0 uses Apple's QuickDraw GX technology for titling. Users of Version 2.0 can add unlimited titling layers to a single track and move titles through the image or across the screen via keyframe controls. Users have control of softness, blurring, leading or kerning of PostScript, GX and TrueType fonts; they can also add gradients and drop shad-

ows. Alpha-key support lets users create transparent text effects.

Radius Edit 2.0 requires 32 Mbytes of RAM; System 7.5.1 or higher; QuickDraw GX; QuickTime 2.1; and either a Radius VideoVision PCI, VideoVision Studio or Radius Telecast board.

Although it may work with QuickTime-capable hardware from other companies, Radius Edit 2.0 is currently available only to owners of Radius video hardware. Version 2.0 is a free upgrade for owners of Edit 1.0 or Radius' Telecast systems; owners of the company's VideoFusion can purchase Radius Edit 2.0 for \$199.

Radius Inc. of Sunnyvale, Calif., can be reached at (408) 541-6100 or (800) 227-2795; fax (408) 541-6150; support@radius.com; http://www.radius.com. □

OptiCal

From Page 12

their site, the company said. By reading ICC profiles, OptiCal can calibrate the colors on a user's display to printed output.

In addition, users can create custom calibrations. OptiCal includes controls for target-color temperature and white point. Users can also adjust gamma curves for RGB channels manually.

OptiCal beta tester Ernie Liu is clinical engineer at Acuson Corp., a medical imaging company in Mountain View, Calif. According to Liu, The Color Partnership's software has been a

boon to the company's Mac-based ultrasound imaging.

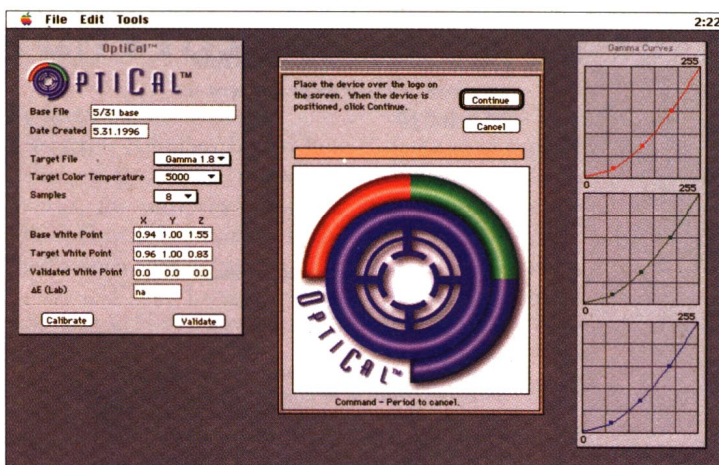
"Color fidelity is very important to us," Liu said. "I was going crazy until [OptiCal] came along; it really lets what we need it to do."

"We tried other products that don't really match two monitors," Liu said. OptiCal "is the first one that's really given us an on-site solution among NuBus, PCI and 68K Macs." Furthermore, he said, "some of the stuff that I've seen on competitors [doesn't] match very well at low light," while OptiCal excels at calibrating the low-light images Acuson works with.

OptiCal for the Mac costs \$695 with the OptiMate colorimeter and \$395 as a software-only package. The company also offers a version for Silicon Graphics Inc. workstations.

The Color Partnership also said it is preparing SoftProof, an Adobe Photoshop plug-in that lets users do color proofing within the image-editing application. The software, which will let users calibrate an unlimited number of individual windows to different output devices, will debut at Seybold San Francisco in September. Pricing has not yet been determined.

The Color Partnership of Del Mar, Calif., is at (619) 259-8688 or (800) 554-8688; fax (619) 259-8709; info@colorpar.com; http://www.colorpar.com. □



OptiCal lets users adjust the temperature and white point of target colors and adjust gamma curves for RGB channels manually.

DTI plug-in puts the squeeze on ad scans

By Matthew Rothenberg

Mac-based publishers who want to get a handle on camera-ready ads and line art can tap into a new Adobe Photoshop plug-in package from Digital Technology International Inc.

AdCompress, priced at \$995, comprises Acquire and Export modules that work with Photoshop 2.5.1 or newer versions. The software uses an LZW-based 1-bit PostScript Level 2 algorithm to compress monochrome scans at a ratio of up to 30-to-1, depending on the amount of white space within the original image, DTI said. The compressed image can then be saved to an image database

or an Open Prepress Interface (OPI) server.

The compressed file includes an OPI-compatible QuickTime preview image that can be used for position only when laying out a page in Adobe PageMaker, QuarkXPress or other Mac-based applications. When the pages containing the images are printed, they can be decompressed automatically by any PostScript Level 2 RIP, the company said.

AdCompress ships with a hardware-based key that attaches to the keyboard's ADB port.

Digital Technology International Inc. of Orem, Utah, can be reached at (801) 226-2984; fax (801) 226-8438. □

QuickTime

From Page 12

Back in the trenches, however, it looks like multimedia competition is still fierce.

"The article is wrong," said Brent Ethington, ActiveMovie product manager at Redmond, Wash.-based Microsoft. "People at high levels talk about things all the time. We're not in the process of licensing QuickTime like the article implied."

Microsoft spokesman Andrew Mackles said ActiveMovie is still scheduled for release this month. "We stand behind our ActiveMovie APIs, and we've got support from hardware and software developers," he said. "We're not backing off our commitment to make ActiveMovie the standard."

Jonathan Knowles, Apple senior product manager of QuickTime technology, had a similar response. "We have no idea where this story came from," he said.

With a release of QuickTime 2.5 just two weeks away, Knowles said it's unlikely that any changes would be made to fa-

cilitate a new Microsoft alliance. "We're slaving 22 hours a day to get it out the door," he said.

In addition, Knowles said he's not worried about competition from ActiveMovie. "It is by no means a threat," he said. "We have yet to identify one developer who says they're going to use ActiveMovie."

Montalvo asserted that Apple would be ready to cooperate, however. "We're being very pragmatic and proactive when it comes to taking QuickTime cross-platform for playback and authoring. If incorporating some elements of ActiveMovie will get us there faster, we may use them," he said.

Recent high-level discussions between Apple CEO Gilbert Amelio, Apple Chief Operating Officer Marco Landi and Microsoft Chairman Bill Gates have touched on improving relationships and cooperation between the companies (see 06.24.96, Page 1).

"That's what Bill wants, and that's what Gil wants. Everything is on the table," Montalvo said. □

MovieWorks

From Page 12

color PICT, TIFF or Paint images. Users can assemble the individual elements of a presentation within MovieWorks' Composer component and add 16-bit AIFF (Audio Interchange File Format) or snd audio. A freely distributable Player module lets users save interactive projects as standalone applications.

The Component module also

offers a variety of effects, including transitions, path-based animation, scaling and time-based layer changes, Interactive Solutions said.

Because the software draws on QuickTime compression for all the elements, users can play synchronized multimedia presentations created with MovieWorks on most Mac systems equipped with 8 Mbytes of RAM or more, the company said.

After Apple ships QuickTime

2.5 in mid-July, Interactive Solutions plans to ship an update with support for sprite and MIDI tracks. MovieWorks Interactive owners will be able to upgrade free.

Registered users of earlier versions can upgrade to MovieWorks Interactive 3.0 for \$29.95.

Interactive Solutions Inc. of Pleasanton, Calif., is at (510) 734-0730; fax (510) 734-0758; http://www.interactivesol.com. □



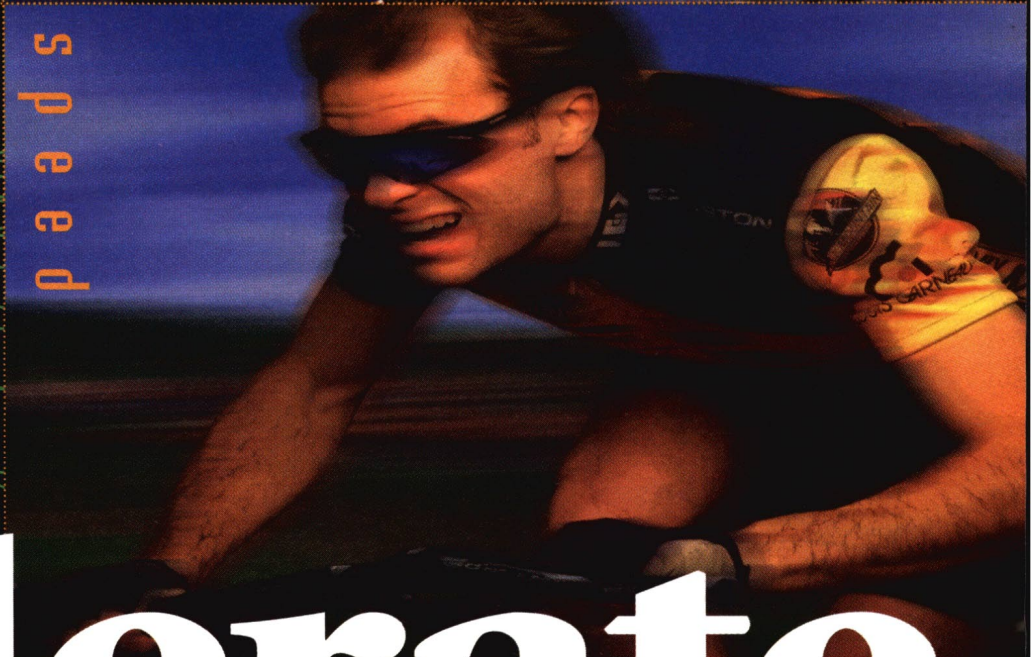
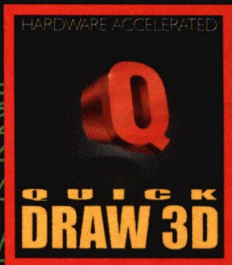
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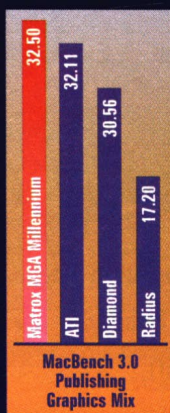
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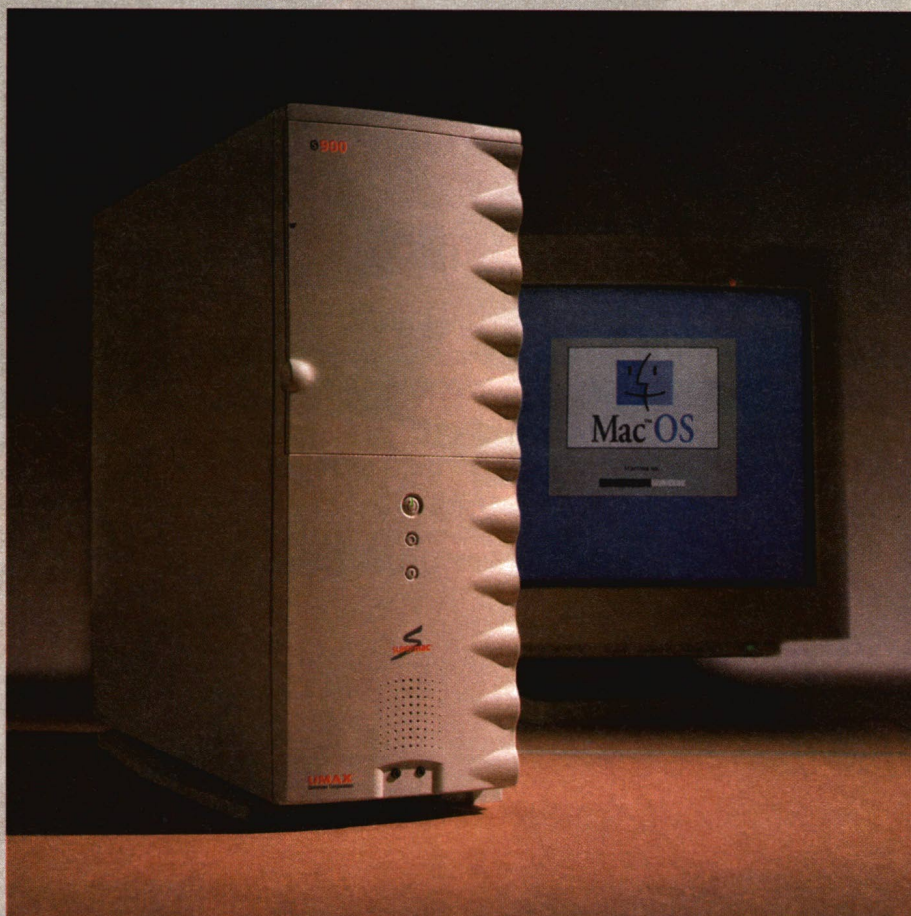
MacBench 3.0 publishing graphics mix test performed on Power Mac 9500/132 with 40MB of RAM @ 1152 x 870 in 16.7 million colors with Matrox Millennium for PCI Power Mac, Diamond Javelin, ATI Xclaim and Radius Thunder 3D/1600.

For years, creative professionals have relied on award-winning UMAX scanners to capture the high quality images they demand as an essential part of their creative solutions. Now, UMAX has come full circle by offering them the ultimate computers on which to realize their vision...



Introducing the SuperMac S900

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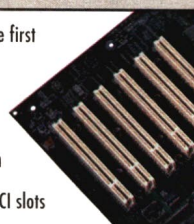
1 Interleaved Memory

Every S900 comes standard with 16MB of interleaved memory on the motherboard for fast memory access and best system performance. Others require the purchase of additional DIMMs to implement memory interleaved.

3 Exclusive PCI-to-PCI Bridge

Not only does the S900 have an amazing 6 PCI slots, it is also the first to enable burst communication between them.

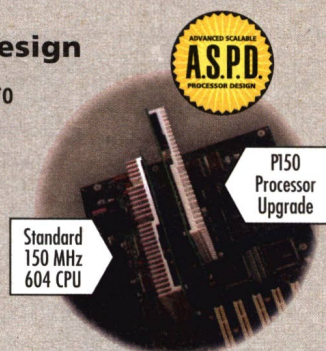
The S900 is the first computer to enable direct communication between ALL PCI slots



UMAX's exclusive PCI-to-PCI Bridge design enables direct communication between all PCI cards with the greatest performance, no matter which slots they're inserted in, also making it more expandable and easier to configure.

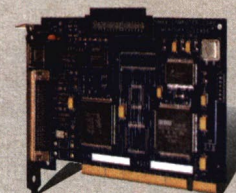
2 Advanced Scalable Processor Design

UMAX's exclusive A.S.P.D. provides easy upgradeability to dual processors or for higher speed processors as they become available. This modular configuration costs less and is far more flexible, allowing programs such as Photoshop to increase its performance up to 80% with the addition of a second processor card.



4 E100 I/O & Networking Card

To increase performance even further, UMAX offers the ultimate combination upgrade that gives you both Ultra-Wide SCSI and 100Base-T on one easy-to-install PCI card. The 100Base-T boosts data transfer over networks up to ten times the speed of standard 10Base-T connections. Ultra-Wide SCSI provides 16-bit wide data access at rates up to 40MB/sec. (4 times the speed of regular SCSI)



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* Suggested Retail Price

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▶ SuperMac E100 Extended Performance Ultra-Wide SCSI / 100Base-T	\$ 495
▶ SuperMac P150 604-150 ASPD Processor Upgrade	\$ 995

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Mac gear hits Viscomm

By Kelly Ryer

Digital imaging may be all the rage, but at June's Viscomm West '96 exposition in San Francisco, traditional film-based cameras were still in the foreground. Mac-based showgoers looking for new digital developments found several new items, however.

► **HindSight Ltd.** of Highlands Ranch, Colo., rolled out a new version of StockView, its \$420 image-cataloging program. Based on ProVUE Development Corp.'s Panorama database, StockView III features a new interface and adds a cross-referencing system. A new CD-ROM browser can catalog images on a CD automatically.

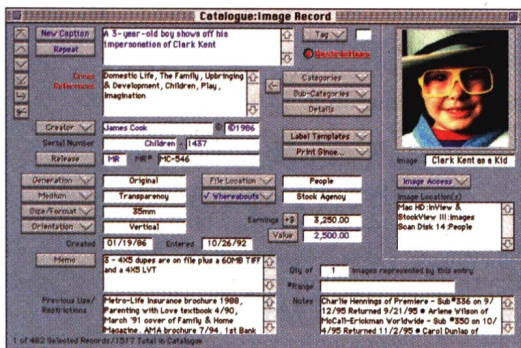
The software is designed to work with HindSight's InView III, which handles contact management, bookkeeping, word processing, scheduling and billing.

InView III retails for \$520, but HindSight offers both packages along with Panorama Direct for \$745.

► **Pixera Corp.** of Cupertino, Calif., made its debut with two new desktop video cameras, the Pixera Professional and the Pixera Personal. According to the company, each camera combines a low-cost 250,000-pixel CCD (charge-coupled device) with an electro-mechanical light refractor to yield more than 1 million pixels per image.

The two cameras ship with a suite of cataloging and image-composition software as well as a plug-in for Adobe Photoshop. The \$795 Personal version includes a fixed-focus lens, while the \$1,195 Professional has a C-mount lens that lets users substitute microscope or telephoto lenses.

► **Sienna Imaging Inc.** of Englewood,



Users of HindSight's StockView software can manage images by adding to more than 25 fields.

Colo., demonstrated its FotoPrint 5000. According to Sienna, the \$54,000 photo printer is capable of printing up to 50 full-color, full-bleed, 11-by-17-inch photographic prints per hour. The printer is based on a CRT imaging engine and currently connects to the Mac via a NuBus card; Sienna said a PCI version is due this summer.

The printer outputs images measuring up to 12 by 18 inches onto standard RA-4 photographic material. It ships with Photoshop plug-ins and works with a variety of third-party PostScript RIPs, the company said.

► **Amiable Technologies Inc.** of Philadelphia showed off a newly released version of FlexiSIGN-Pro. Version 5.6 of the \$4,799 sign-making package includes several new printer drivers, new diffusion methods and a custom RIP.

Amiable has also added several new features to its PhotoPrint Designer text and image-layout and printing tool (see 03.04.96, Page 8).

Now scheduled to ship in July, PhotoPrint Designer will let users add basic text and shapes to their images as well as create simple masks. □

Xtras get handle on EPS files

By Rebecca Gulick

TechPool Software Inc. recently released two Macromedia Xtra plug-ins for importing EPS and PostScript files.

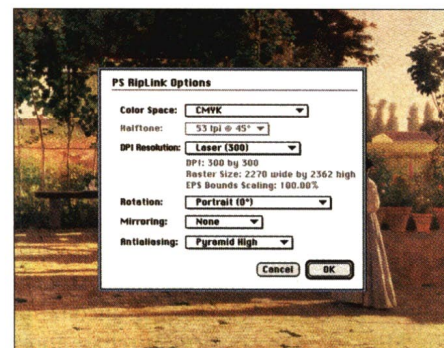
PS RIPLink, which shipped in June for \$99, is a PostScript Level 2 interpreter that lets users of Macromedia Inc.'s XRes image-editing software import EPS files for viewing and editing. The Xtra can rasterize Macromedia FreeHand, QuarkXPress, and Adobe PageMaker and Illustrator EPS files.

Users can specify the color space and output resolution and scale images by pixels or percentages. PS RIPLink offers six levels of anti-aliasing and automatically creates an editable mask when a graphic with RGB or alpha channel information is imported.

Earlier this year TechPool shipped the \$125 PS EditLink, a FreeHand Xtra that lets users import any PostScript or EPS file directly into FreeHand. This PostScript Level 2 interpreter transforms PostScript

or EPS files into editable paths, text and bit maps. Import options include custom page sizes and fitting pages to EPS bounds.

TechPool Software Inc. of Cleveland can be reached at (216) 291-1922 or (800) 925-6998; fax (216) 382-1915; info@techpool.com; http://www.techpool.com/. □



PS RIPLink's PostScript Level 2 interpreter lets XRes users import EPS files into Macromedia's image-editing software.

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LCD hardware extends range

By Matthew Rothenberg

The latest batch of LCD projectors and panels, most introduced in June, is shedding new light on the Mac-based presentation market.

All the products support Mac and Intel-

standard PC signals and include remote controls.

► **Polaroid Corp.** of Cambridge, Mass., unveiled three new devices: the Polaview 110 projector and Polaview 1900 and 1700 panels.

The Polaview 110, available now for \$9,195, outputs 500 lumens to project 24-bit-color, 640-by-480-pixel images measuring up to 33.3 feet diagonally. It supports NTSC, PAL (European) and SECAM (French) video devices and includes stereo speakers.

The \$2,995 Polaview 1900 and \$2,595 Polaview 1700 are based on 640-by-480-pixel active-matrix LCD displays that measure 8.4

transistor) panel; it outputs 300 lumens, allowing the device to project 24-bit-color images measuring up to 13.6 feet diagonally. The DP9100 provides one input for computer signals and two for NTSC, PAL, SECAM and S-video sources.

Like the company's earlier DP4100, the DP9100 can be outfitted with MediaExpress, a new option that displays Adobe Acrobat documents without a connected CPU. A floppy-only version is \$1,995, while a MediaExpress unit with a 540-Mbyte hard drive is \$2,495.

The DP9100 includes four stereo audio inputs and one microphone jack. Stereo speakers with 3-watt amplifiers are provided as well.

The \$9,195 DP5500 is based on a 640-by-480-pixel LCD panel and outputs 500 lumens, letting it project full-color images measuring up to 30 feet diagonally. It features a motorized zoom lens and includes two computer and two video inputs, the latter supporting NTSC, PAL and SECAM signals. It comes with an internal speaker and LightBoard drawing tools for annotating images.

The \$8,495 Ovation+ 944 is an active-matrix LCD projection panel with a resolution of 1,280 by 1,024 pixels. The 24-bit-color panel measures 10 inches diagonally. The panel accommodates NTSC, PAL, SECAM and S-video sources. It includes stereo audio output and ships with the LightBoard drawing tools.

► **Dukane Corp.** of St. Charles, Ill., introduced the ImagePro Model 7010, a \$9,495 projector that outputs up to 300 lumens, allowing it to generate full-color images measuring up to 18.8 feet diagonally.



Dukane's ImagePro Model 7010 has a resolution of 640 by 480 pixels but uses digital pixel compression to handle Super VGA input.

The device supports NTSC, PAL, SECAM and S-video signals; can be ceiling-mounted; and offers electronic keystone-correction, power-zoom and focus-control capabilities.

► **Sony Electronics Inc.** of Park Ridge, N.J., unveiled a new line of projectors.

The VPL-V500Q, slated to ship in August for \$7,990, will output 500 lumens to project full-color, 640-by-480-pixel images at sizes up to 25 feet diagonally; it will display NTSC, PAL and SECAM video signals. The device will also feature Sony's own Fly-Eye technology, which the company said will help integrate images and eliminate on-screen hot spots.

The VPL-W400Q and VPL-V800Q, due to ship later this year but not yet priced, will project 400 and 800 lumens.

► **Boxlight Corp.** of Poulsbo, Wash., toned up its portable ProColor 3080 projector. The \$7,999 ProColor 3080+ replaces the 3080 and outputs 350 lumens, up from 250 lumens with the earlier model. The device offers a resolution of 640 by 480 pixels and can project 24-bit-color images measuring up to 25 feet diagonally. It handles NTSC, PAL and SECAM video inputs.

The 3080+ includes an adjustable zoom lens and stereo speakers. □



Telex's Firefly P200 measures just 10.3 by 15.9 by 2.9 inches and weighs less than 10 pounds.

inches diagonally and project up to 2 million colors. Each device weighs 5.3 pounds and comes with a serial interface.

The Polaview 1900 supports NTSC, PAL and SECAM signals. The Polaview 1700 supports only computer signals but can be outfitted with a video adapter for \$695.

► **Telex Communications Inc.** of Minneapolis rolled out a pair of projectors, including a portable model that weighs less than 10 pounds.

The Firefly P200 LCD Notebook Projector, priced at \$5,995, weighs 9.4 pounds and can be collapsed to a height of 2.9 inches. The device is based on a 640-by-480-pixel LCD and outputs 200 lumens; it can project 24-bit-color images measuring up to 9 feet diagonally.

The device supports NTSC, PAL and SECAM video and features stereo speakers and illuminated controls.

The Telex P400, slated to ship in August for \$9,995, will use an 800-by-600-pixel LCD and a 250-watt metal-halide lamp to output 400 lumens, allowing it to project 24-bit-color images measuring up to 25 feet diagonally.

It will include inputs for NTSC, PAL, SECAM, M-PAL and N-PAL signals.

The P400 will offer a rear-projection option, power zoom and focus, and keystone correction. It will also include a built-in speaker and amplifier.

► **Proxima Corp.** of San Diego announced two new projectors and a projection panel.

The Desktop Projector 9100, slated to ship this summer for \$16,995, is based on a 1,024-by-768-pixel active-matrix TFT (thin-film

Adobe revenue up, net down

By Matthew Rothenberg

Adobe Systems Inc.'s revenues rose for its second quarter of fiscal 1996, but profits dipped compared with the same quarter a year ago.

According to the Mountain View, Calif.-based company, total revenues for the quarter ended May 31 were \$204.3 million, up 8 percent from the \$189.5 million posted for the second quarter of 1995. Revenues for the first six months of 1996 were up 5 percent from the same period last year, Adobe said.

Adobe's licensing revenue rose to \$49.3 million, a 9 percent increase from the second quarter of 1995.

Net income for the quarter fell 38 percent, to \$22 million, or 29 cents per share, compared with \$35.2 million, or 47 cents per share, for the same quarter last year. Adobe attributed the drop in income to the \$15 million it spent to purchase font-software maker Ares Software Corp. of Foster City, Calif. (see 05.27.96, Page 4).

According to Michael Murphy, editor

of the California Technology Stock Letter in Half Moon Bay, Calif., Adobe "met or slightly beat the Wall Street estimate before Ares." According to Murphy, Wall Street had expected quarterly earnings of 45 cents per share, which is what Adobe had delivered before the Ares expenditures.

"Of course, Wall Street's expectations [for Adobe] were not very high," Murphy said. He cited Adobe's efforts to integrate Frame Technology Corp. and the company's recent reorganization into a new divisional structure. Furthermore, Murphy said he expects a summer slump in personal computer sales to impede Adobe's September earnings.

"I think [Adobe's reorganization] was a response in great part to the Internet," Murphy said. "When you see Microsoft [Corp.] going through the changes it's going through, or for that matter Apple ... you have to be suspicious of somebody who's not reorganizing — maybe they're not getting the message." □

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—MacUser 4/96

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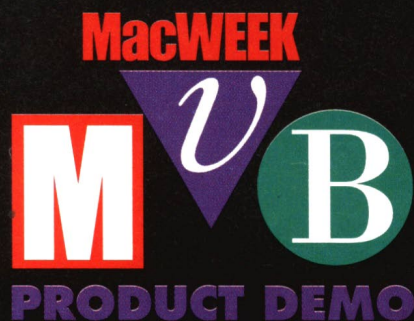
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Anita Malnig, MacWEEK Director of Special Editorial Programs, will present findings from the 8th Annual MacWEEK 200 Survey. The survey focuses on the installation of Macintosh technology in the largest and most heavily-invested Macintosh sites.

Keynote Address

Apple's Future Strategies

Join us for candid insight as key Apple executives and MacWEEK editors participate in a lively discussion of Apple's new vision under the leadership of Gilbert Amelio.

- What is the fate of Mac OS 8?
- Will the Harmony update be big enough to keep Windows watchers at bay?
- What are the long-term goals for its newly reorganized divisions?
- How will Apple integrate clone vendors into their strategy?
- And what does all of this mean for Mac buyers?

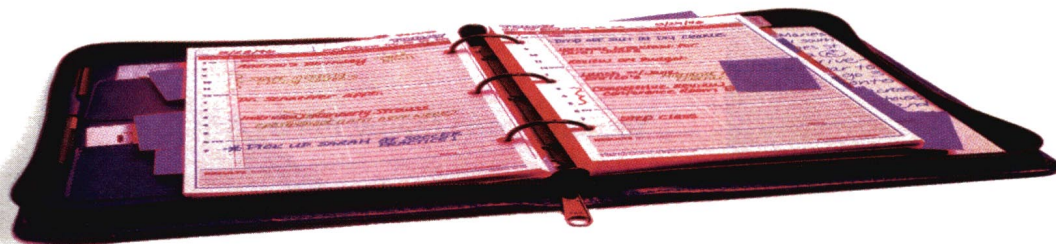
Plan to spend the morning with us as we bring you closer to the decision makers at Apple. This promises to be an exciting line-up you won't want to miss!

Afternoon Session

Corporate Backup Strategies

Dantz Development, the leaders in Macintosh backup, will discuss integrating Windows computers into your corporate backup strategy with the newest addition to the Retrospect family, Remote Pack for Windows 95/NT.

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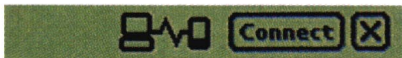
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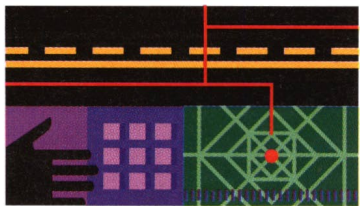


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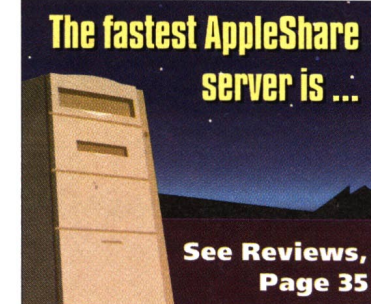
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GATEWAYS



PAGE 22

Internet • Web Authoring • LAN Management

07.08.96 MACWEEK

Sonic readies integrated Net servers

By James Staten

Sonic Systems Inc. will hop aboard the crowded Internet train next week at Mactivity '96 in San Jose, Calif., where it will unveil a family of integrated Internet servers.

The product line will debut with FTP; Dynamic Host Configuration Protocol (DHCP); and e-mail servers, which will ship later this month. Web and domain name servers (DNSes) will follow in August.

The programs will be united through an administration application called InterManage, which will centralize all setup and configuration settings and maintain a unified log. The servers will be Power Mac-native and optimized for Open Transport, Sonic said.

The DHCP server, which will handle distribution of TCP/IP addresses on a LAN, will perform dynamic addressing as well as static assignment and BootP.

See Sonic, Page 24

Web editing is DTP of the '90s

WYSIWYG HTML promise unfulfilled

By Joanna Pearlstein

A band of HTML editors has recently marched into the Mac market, and several more players are warming up to join the parade. But the new offerings don't impress professional Web page designers, who say the current WYSIWYG tools lack the flexibility necessary to create large Web sites.

Many professionals said they rely on BBEdit, a \$119 text-based HTML editor from Bare Bones Software Inc. of Natick, Mass. Jason O'Grady, a partner at Odyssey Systems Corp. of Manayunk, Pa., designs pages exclusively in BBEdit. "It's fast, it's flexible. ... I hate all the extra crap that [Adobe] PageMill throws in," he said.

Amy Goodloe, principal designer at Women Online Designs of Oakland, Calif., said, "You don't have to know what you're doing in PageMill, and I think that's a problem — you can more easily screw up that way."

Despite these comments, the software industry seems to be focusing on WYSIWYG editors as

the only players in the market. Research by International Data Corp. of Framingham, Mass., showed PageMill and America Online Inc.'s GNNpress as the two most popular HTML editors last year. The study did not include text editors such as BBEdit.

Industry watchers have said the Web page editing market is in a position similar to that of desktop publishing applications 10 years ago. Yet many users said the current products do not offer the ease of use provided by desktop publishing programs of the 1980s.

Laxman Gani, online services director at the Austin (Texas) Chronicle, said he has not found an HTML editor that combines functionality and ease of use the way QuarkXPress and Adobe PageMaker do for desktop publishing.

See WYSIWYG, Page 24



New design freedoms in HTML 3.2

By Tonya Engst

The World Wide Web Consortium recently announced HTML Version 3.2, which adds a collection of popular Web page tags, including those for tables, attaching Java applets and designating colors by name rather than hexadecimal number. Yet the new version is far from being a standard.

As a matter of fact, HTML 2.0, which has been widely adopted by the industry, is only a proposed standard and is not expected to be finalized until later this year. HTML 3.2 is just now starting the public comment phase, in which organizations can propose additions to the standard. By the time it reaches final form, expected sometime in 1997, it may be completely different.

For example, Webmasters cited two gaping omissions in the standard: frames and style sheets.

"Not to have frames in it is just stupid," said Brad Schrick, a Mac Internet consultant based in Palo Alto, Calif. He said he expects the World Wide Web Consortium, or W3C, to adopt specifications for these before the standard is finalized.

The Internet Engineering Task Force (IETF), based at The Corporation for National Research Initiatives in Reston, Va., and the W3C, based at the Massachusetts Institute of Technology in Cambridge, are also working on additions that will likely be part of the specification. W3C has proposed an object tag that would standardize the insertion of plug-in and Java-related elements on a page. IETF currently has a proposal for a tag that would enable file uploads through a form.

An enhancement to the set of tags for HTML tables is also on the drawing board. It would provide the ability to group columns

See HTML, Page 24

Farallon ships combo PC Card

By Joanna Pearlstein

Farallon Communications Inc. last week began offering PowerBook users one more item for their PC Card slots.

The company shipped the EtherMac LAN/Modem PC Card, a Type II PC Card that combines a 28.8-Kbps modem with 14.4-Kbps fax transmission capabilities and a 10BASE T Ethernet transceiver.

Priced at \$499, the card is hot-swappable and uses a removable connector called the SafeJack, a small dongle with an RJ-11 and RJ-45 port. The card also comes with a copy of Farallon's \$299 remote-access software package, Timbuktu Pro.

While a host of PC Card 28.8-Kbps fax modems are available, only a few cards combining fax modem and Ethernet functionality are currently available for the Mac. Both Sunnyvale, Calif.-based Global Village Communication Inc. and Salt Lake City-based Dayna Communications Inc. sell combination cards.

Farallon Communications Inc. of Alameda, Calif., can be reached at (510) 814-5100; fax (510) 814-5023; info@farallon.com; http://www.farallon.com.



Farallon's new \$499 EtherMac LAN/Modem PC Card features a unique removable connector called the SafeJack.

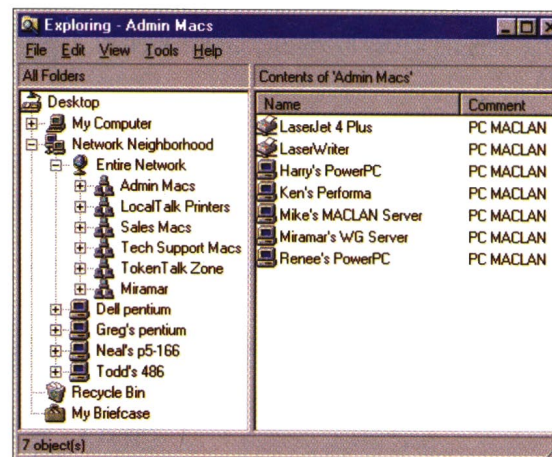
Miramar to put Mac files on Win 95

By James Staten

Users of Microsoft Windows 95 will become full citizens of Mac-centric networks this month when Miramar Systems Inc. ships PC Maclan 6.0.

Previously called Personal Maclan Connect, this \$199 Windows application lets Intel-standard PCs access AppleTalk network services such as printers and AppleShare servers (see 07.31.95, Page 12).

The previous release, Version 5.5, worked with Windows 95 but was a 16-bit Windows 3.1 application, Miramar said. Version 6.0 is a full 32-bit Windows 95 program that lets PC clients read and write documents with file names up to 31 characters long and displays LAN services within Windows 95's Network Neighborhood interface. Miramar said PC Maclan 6.0 also extends the Mac printer intelli-



Miramar's PC Maclan 6.0 will let Windows 95 users explore the directories of Mac volumes and access files with names longer than eight characters.

gence to Windows 95 clients, informing them about the status of print jobs.

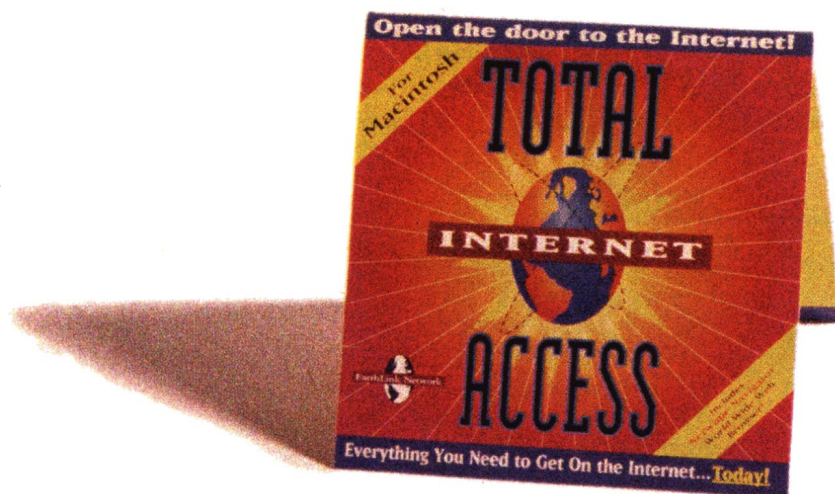
Curtis Smith, senior PC developer at Mac-heavy graphic design house The Kuester Group Inc. in Minneapolis, is testing the new version. "I can now see everything on the network and the server that they can see," he said.

"I could get at them before, but there was a lot of guesswork involved."

Upgrades from previous versions are \$99.

Miramar Systems Inc. of Santa Barbara, Calif., is at (805) 966-2432 or (800) 862-2526; fax (805) 965-1824; sales@miramarsys.com; http://www.miramarsys.com. □

Internet for Macintosh. Install disks. Double click.



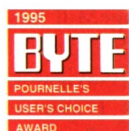
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Info via email: info@earthlink.net. Live human via email: sales@earthlink.net. Visit our Web site at <http://www.earthlink.net>



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Sonic

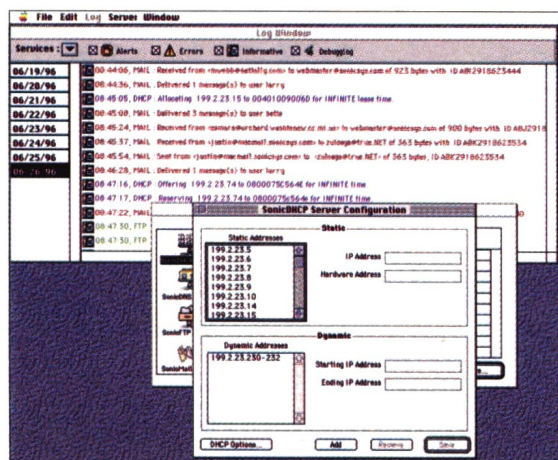
From Page 22

The FTP module will be multi-threaded, letting several users access the server simultaneously. It will also use System 7's Users & Groups for setting access privileges. Alias resolution and Process Control, which lets administrators launch remote applications on the server, will also be supported.

Sonic's e-mail server will support SMTP (Simple Mail Transfer Protocol) and Post Office Protocol 3 (POP 3) as well as Authenticated POP. It will provide mail forwarding and allow unlimited numbers of users and groups, Sonic said.

The Web server module will provide security through realms and password authentication. It will support most current Mac CGIs (Common Gateway Interfaces) and run multithreaded.

Sonic's DNS will work as ei-



All of Sonic's Internet servers will use a centralized administration interface. The configuration screen for the DHCP server is shown here.

ther a primary or secondary server, translating URLs into TCP/IP addresses — changing www.macweek.com, for example, to 10.24.102.78. DNSes let Webmasters create RAICs (redundant array of inexpensive computers) to balance the load of a busy Internet site or direct

clients to specific machines based on the content requested.

Sonic said it plans to upgrade each of the servers before the end of the year. The company said it will, for example, add support for Quarterdeck Corp.'s WebStar API to its Web server by the end of the year, allowing users to add WebStar plug-ins.

Pricing will start at \$499 for the first server and \$99 for each additional server. The InterManage administrator will be included free.

Sonic's presence in the Internet server market will come at a time when a variety of shareware applications, such as Peter Lewis' Net-Presenz, and freeware servers, such as Apple's MacDNS and Apple Internet Mail Server, dominate the market. "We've found that you often can't run more than one of these products on the same machine without lots of crashes," said Sonic CEO Sreekanth Ravi. "Plus, they all have their own administration interfaces that are all very different."

Sonic Systems Inc. of Sunnyvale, Calif., is at (408) 736-1900; fax (408) 736-7228; sales@sonicsys.com; http://www.sonicsys.com. □

HTML

From Page 22

and have table text scroll between a fixed header and footer.

A number of companies are also contributing their ideas. Adobe Systems Inc., Apple and several other companies have come together to propose Open-Type, a font technology that will let designers embed both PostScript Type 1 and TrueType fonts into a page (see 05.20.96, Page 10).

Steve Zilles, manager of standards at Adobe, said the Mountain View, Calif.-based company is also interested in bringing its Encapsulated Portable Document Format (EPDF) to HTML. EPDF would act like a graphic and provide a way to place complex layouts on Web pages.

According to Paul Balle, product manager in the Internet Platform and Tools Division at Microsoft, the Redmond, Wash.-based Windows maker is working with W3C on cascading style sheets and on a Web page rating system developed through the Platform for Internet Content Selection (PICS), an industry consortium for Internet decency.

Despite the progress being

made to improve the standard, Webmasters still contend that the best way to ensure a page looks right in all browsers is by sticking to HTML 2.0.

Version 2.0, however, precedes the wide range of HTML extensions supported in browsers such as Netscape Navigator and Microsoft Internet Explorer. As standards develop, and developers implement new tags in browsers and authoring tools, Webmasters need guidelines for tags to use now. They must balance the desire to be on the cutting edge with the importance of delivering a clear message.

Chuq Von Rospach, Apple solutions marketing Webmaster, said that about 75 percent of his users run Netscape Navigator; hence he uses HTML 2.0 tags that will work in any browser, along with a smattering of Navigator extensions that won't cause display problems in other browsers. He said he plans to use tables more extensively in the near future.

Schrick said his rule of thumb for tag adoption is entirely ruled by the browsers that visit his site, not a standard. "I look at my connections, and its 90 percent [Navigator] and 70 percent [Version] 2.0." □

Dendera to add a P to HTML editing

By Joanna Pearlstein

A small California company is cooking up plans to add a new ingredient to the bubbling HTML editing stew pot.

The newest item on the menu, called simply P by its developer, Dendera Software, will be a graphical HTML editor offering support for Netscape Navigator extensions, frames, tables and forms.

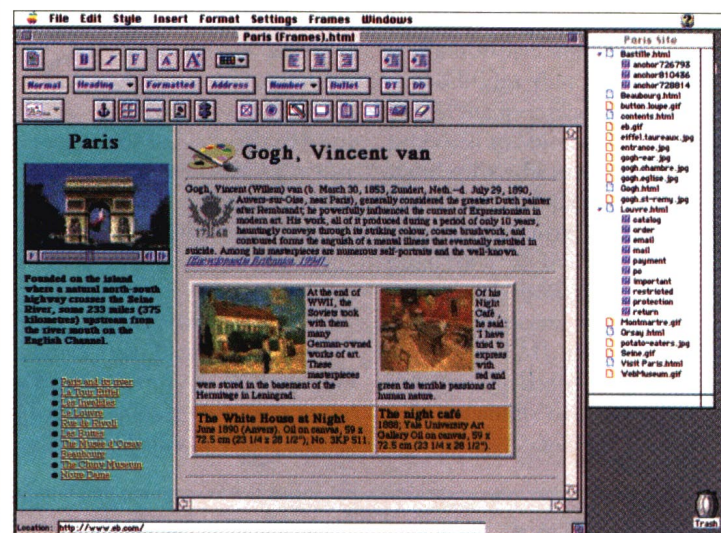
With P, users will be able to add graphics, text, sound and movies to Web pages via drag-and-drop. They will also be able to embed Java applets and edit JavaScripts. The product's form support will let users create pop-up menus, radio buttons and check boxes. Submit and Reset

buttons, as well as text fields, will also be provided.

Dendera said a source viewer will display HTML code with color syntax highlighting. The product will also let users input HTML tags manually.

Like Adobe PageMill and Claris Corp.'s Home Page, P was developed by a small company. Dendera hopes it will also be snapped up by a well-known vendor; however, the company will not name prospective buyers. Dendera said it hopes to ship the product by the end of the summer. Pricing has not been set.

Dendera Software of Palo Alto, Calif., can be reached at (415) 328-4366; zaky@best.com. □



The newest challenger on the HTML editing front is P from Dendera Software. The product supports drag-and-drop editing, frames, tables and forms.

WYSIWYG From Page 22

Joan-Carol Brigham, senior staff consultant at IDC, said HTML and PageMill today are like Standard Generalized Markup Language and PageMaker were in 1985. "In 1985, PageMaker was cool, but it wasn't for professionals," Brigham said. "It's almost the exact analogy today. The professionals are saying, 'I don't need the user interface. I can do it a lot faster this way.'"

For many, the promise of graphical HTML editing remains unfulfilled partially because of the very nature of the markup language. "The problem with WYSIWYG HTML editing tools is that they are oxymorons," said Brian Behlendorf, chief technology officer at Organic Online, a professional Web design company in San Fran-

cisco. "HTML is a structural language, not a presentational language like PostScript, so what you see when you write it may very well not be what you see when you view it."

Analysts and users said that new WYSIWYG tools, such as PageMill and Claris Corp.'s Home Page, may find more success in lower-end markets, even though those products are targeted at a broad range of users. Several users, critical of the first release of PageMill, expressed optimism about Version 2.0, due this summer. Odyssey's O'Grady said he thought the upcoming HoTMetaL Pro 3.0 from SoftQuad Inc. sounded interesting, but, "we've tried others, and we always come back to BBEdit."

IDC's Brigham said that marketing or human resources employees who are creating internal

Web sites are more likely to use WYSIWYG tools such as PageMill. She said the new WYSIWYG tools "will open up the market to the nonprofessional and the business user. I think the intranet and Internet will evolve to be different beasts, and the tools will be different."

One drawback of graphical HTML editors is the differences among the various Web browsers. "With BBEdit you can preview in whatever browser you use," O'Grady said. "PageMill has its own little browser, but if you view a page in Netscape [Navigator] or Microsoft Internet Explorer, it looks totally different."

Chris Stevens, analyst at the Aberdeen Group in Boston, said, "The problem with WYSIWYG is, WYSIWYG for what? Netscape [Navigator] or Mosaic? It changes so much by browser." □

HTML 3.2 and beyond

IN THE SPECIFICATION

- ▶ Tables
- ▶ Java applet support
- ▶ Color by name
- ▶ Text wrap around images
- ▶ Superscript and subscript

PROPOSED ADDITIONS

- ▶ Frames
- ▶ Style sheets
- ▶ OpenType
- ▶ Object tags
- ▶ Encapsulated PDF
- ▶ Enhanced tables
- ▶ Content ratings

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Aperture Grille Pitch	0.30mm	0.30mm	0.25mm	0.25mm
CRT Size	21"	20"	17"	17"
Viewable	20.0"	19.1"	16.0"	16.0"
Horizontal Scan Rate	30-96 KHz	30-85 KHz	24-82 KHz	30-65 KHz
Maximum MAC [®] Resolution	1600x1200	1280x1024	1280x1024	1024x768
Color Control	Yes	Yes	Yes	No
CRT Warranty	3 Years	2 Years	3 Years	2 Years
MSRP*	\$1,995	\$2,299	\$945	\$1,099

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Source Code: WWS596



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2FT3651

PC Connection

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MacWAREHOUSE

800-255-6227



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to burn the roof of your mouth
with pizza.

it is human nature to
live ever-so-slightly beyond your means.

it is human nature to
want to avoid modem problems
during a business trip.

we can help with some parts
of human nature.



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Retrieve It! fetches Net text

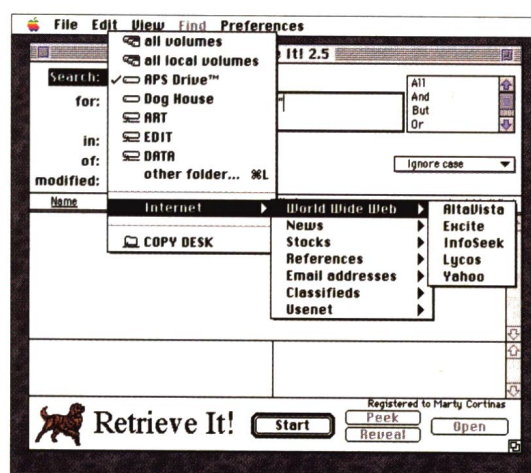
Uses Web services
to search on Internet

By Marty Cortinas

MVP Solutions will join the Internet pack in August when it releases Retrieve It! 2.5, the latest version of the company's text-search utility.

On top of Retrieve It!'s existing capabilities to do content searching on local and LAN volumes (see 06.08.92, Page 6), Version 2.5 will lean on the Netscape Navigator and Microsoft Internet Explorer browsers to add Internet capabilities.

When viewing found text files in Retrieve It!'s document viewer, users will be able to click on URLs and have their browsers open to that location. Navigator users will also be able to click on an e-mail address and have Navigator's built-in e-mail client generate a new message to the selected user. The e-mail function will be limited to Navigator, the company said; it will not open other e-mail applications, such as Qualcomm Inc.'s Eudora Lite, which is bundled with Microsoft Corp.'s Explorer.



Retrieve It! 2.5 will let users access popular Internet search engines to find Web sites and get stock quotes.

Version 2.5 will also include shortcuts for sending search queries directly to the AltaVista, Excite, InfoSeek, Lycos and Yahoo! Internet search engines. Results will automatically display in the user's Web browser.

The program will also conduct searches on news and stock services, e-mail address directories, classified ad servers, and Usenet newsgroup indexes.

Through a relationship with Community ConneXion Inc. of Oakland, Calif., MVP Solutions said, Version 2.5 will let users search the Web anonymously. Searches will first go to Community ConneXion's server, which will submit the request for the user, then return the results.

Version 2.5 will also let users go to a Web site by entering either the company name or URL in the Retrieve It! window.

Retrieve It! will remain priced at \$65; owners of Version 2.0 will be able to download the update free from <http://www.mvpsolutions.com/>.

MVP Solutions of Mountain View, Calif., can be reached at (415) 562-3457; fax (415) 428-1784; retrieveit@mvpsolutions.com. □

Castelle unveils Mac fax client

By Joanna Pearlstein

Castelle Inc. this summer hopes to make Mac users in corporate environments full citizens in the world of client-server faxing.

Castelle in August will ship the Macintosh FaxPress Software Option, a Mac client that works with the company's FaxPress fax servers. The client will come with a program that sends, receives, views and prints faxes; a printer driver; and the Fax Notifier, which notifies users when faxes are received. FaxPress for Mac will cost \$995 per server and will let an unlimited number of Mac users send and receive faxes.

Castelle's FaxPress servers are hardware and software packages that connect to networks and multiple fax lines. The servers run on Novell NetWare and can be integrated into several e-mail systems, including Novell Inc.'s GroupWise, Lotus Development Corp.'s cc:Mail and Microsoft Mail. Pricing begins at \$1,695.

Castelle Inc. of Santa Clara, Calif., can be reached at (408) 496-0474 or (800) 289-7555; fax (408) 492-1964; sales@castelle.com; <http://www.castelle.com>. □

AppWare becomes Microbrew, Net development environment

By Clifford Colby

AppWare, the well-traveled, cross-platform application-development environment that Network Multimedia Inc. acquired earlier this year from Novell Inc. of Provo, Utah, has been renamed and repositioned as an Internet development environment.

Now called Microbrew and expected to ship this month, the environment will be geared toward the server side of the Internet. Users will be able to create plug-ins for Version 1.3 of WebStar from Quarterdeck Corp. of Marina Del Rey, Calif.

Network Multimedia said a future version of Microbrew, due in the third quarter, will add tools for development on the client side and provide the capability to create Java applets.

Further out, an update will add the capability to create ActiveX Controls, plug-ins for Microsoft Corp.'s cross-platform architecture that are designed to deliver multimedia over the Internet. The company said



users will also be able to plug ActiveX Controls into Microbrew to extend the environment. The company said it also intends to add OpenDoc capabilities to Microbrew, letting users create OpenDoc parts as well as plug parts into the Microbrew environment.

Compared to competing Internet development tools, Microbrew has a distinct advantage, Network Multimedia said, because it is a visual tool that will be more accessible for nonprogrammers.

Network Multimedia Inc. of Salt Lake City is at (801) 261-8232; fax (801) 261-9668; support@networkmultimedia.com; <http://www.networkmultimedia.com>. □

New Fast Ethernet switches, module

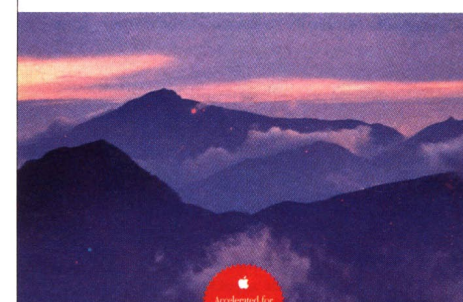
PlainTree Systems Inc. this month will ship a new line of Fast Ethernet switches and a Fast Ethernet repeater module for two of its existing switching chassis.

The WaveSwitch 4205 will be available with five 100BASE TX or 100BASE FX (fiber-optic) ports and two optional expansion ports that can accommodate 100BASE T or fiber-optic hardware. The TX version will cost \$4,995; the FX model will be \$6,995.

The company will also ship the \$2,495 TX P8 Fast Ethernet Bridge Repeater, which will plug into the WaveSwitch 1216 or WaveSwitch 4800 and provide eight 100-Mbyte ports and an internal bridge port.

PlainTree Systems Inc. of Waltham, Mass., is at (617) 290-5800 or (800) 370-2724; fax (617) 290-0963; sales@plntree.synapse.net; <http://www.plaintree.com>. □

**Developers voice their
concerns at MacHack '96,
See News, Page 6.**



YOU BOUGHT

A MACINTOSH TO

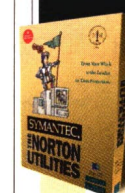
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LOST WORK WON'T

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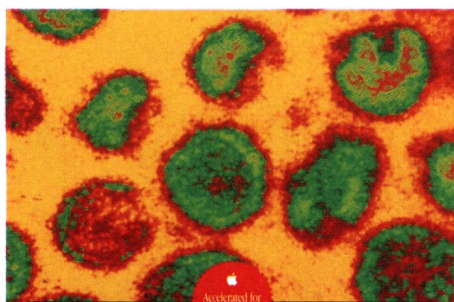
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Milum's WebCruiser to help catalog sites

By John Poultnery

Trying to categorize the vast number of Web sites out there is enough to give anyone the shudders, yet Milum Corp. is giving it a try with WebCruiser.

Priced at \$49.95 and due in August, WebCruiser will serve as a local directory of Web sites. It will create a local home page with categories such as News, Business, Computers, Entertainment, Reference and Sports.

Each category will be linked to a series of HTML pages containing the lead image from the major home pages in each category.

Milum said the major names in each category will be represented.

For example, the Computer section will feature the home pages of Apple, Sun Microsystems Inc., IBM Corp., Microsoft Corp. and Symantec Corp. Milum said it will update the listings quarterly to include the newest sites; the updates will be available online to registered users.

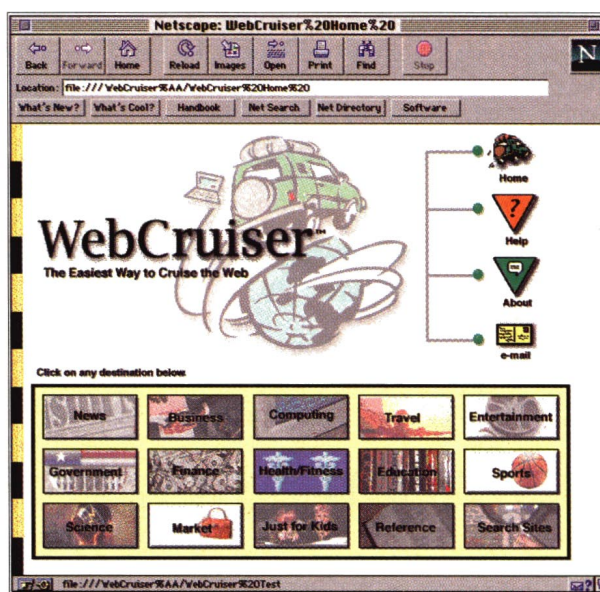
Users will be able to customize the WebCruiser pages by adding images and URLs from sites pertinent to their company or interests.

Milum said browsers can be configured to load WebCruiser files at start-up so users with a dial-up connection can delay connecting to

the Internet until an actual link is selected.

At Austin, Texas-based Travelogix Inc., Webmaster Eric Periche installed WebCruiser as the default screen on the company network. "When our users start Netscape [Navigator], they're essentially linked to services related to Travelogix's business," he said. "It's very fast, since everything's held locally until they activate a link, so they can determine what they need from the preconfigured list."

Milum Corp. of Austin, Texas, can be reached at (512) 469-2966 or (800) 257-2120; fax (512) 469-2920; webcruiser@milum.com; <http://www.milum.com>. □



Choosing a category from WebCruiser's local start page will take users to image maps of home pages for leading sites.

CE, Diamond face Q2 losses

By Stephen Howard and Joanna Pearlstein

Two Mac networking vendors last month said they expect to post lower earnings in the second quarter.

In June, CE Software Inc. swapped CEOs and announced a one-time charge for the current fiscal quarter.

CE, a West Des Moines, Iowa, company best known for QuickMail and QuicKeys, announced that Ford Goodman would step aside as president and CEO to head a new group being built around CE's Internet technologies.

Richard Skeie, a company founder who was CEO until 1993 when Goodman took over amid an earlier round of layoffs, will occupy the top spot until a replacement can be found. Details about the type of products Goodman's Internet subsidiary will develop were not available.

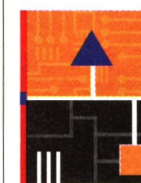
CE also announced plans to take a \$900,000 charge in the third quarter and lay off 10 percent of its 116 employees. The current loss represents deferred costs and write-

offs of intangible assets from its acquisition of PowerCore Inc., CE said. In 1994, CE bought the Manteno, Ill.-based developer of Network Schedule, a LAN calendar program for Intel-standard PCs. That purchase cost CE \$4.8 million and resulted in a \$2.3 million loss during the third quarter of 1994.

The \$900,000 charge appears likely to contribute to a loss for the quarter ended June 30. The company, which lost \$615,000 in the year-ago quarter, has annual revenues of about \$11 million.

Diamond Multimedia Systems Inc. last month said it expected lower-than-predicted revenues in the quarter ended June 30 as a result of smaller margins and decreased demand for the San Jose, Calif., company's telecommunications and graphics products. Diamond said it expects second-quarter earnings to hover around \$120 million. In the second quarter of 1995 Diamond reported revenues of \$95 million; its 1996 revenue will add sales from Supra Corp., which it acquired last year. □

NETWORK TRAFFIC



► Oracle servers to be on AIX

► Internet Phone 4.0 is shipping

Oracle Corp. of Redwood Shores, Calif.,

is working with Apple to certify the

Oracle database server family for use with the AIX-based Apple Network

Servers. The Workgroup and Enterprise editions of Oracle Universal

Server, Oracle WebServer 2.0,

Developer/2000 and Oracle Applica-

tions will all be certified. This an-

nouncement makes Oracle the second

Web-server solution to be offered on

Apple Unix servers. Netscape Commu-

nications Corp.'s Web servers are cur-

rently bundled with select Apple server

models. ... Northvale, N.J.-based

Vocaltec Ltd. shipped the Mac version

of Internet Phone 4.0 last month. The

\$99 application lets users conduct full-

duplex voice conversations over the

Internet (see 04.29.96, Page 1). A trial

version can be downloaded from

<http://www.vocaltec.com>. ... Staying

up-to-date on the latest software re-

leases is now easier thanks to BigHit

Internet Communications Services and

Mr. Machead Inc. The two Dallas-based

companies last month debuted Mac-

Versions, a free Web-based directory

that keeps track of version information

for Mac software. MacVersions can be

found at <http://www.mrmachead.com/macversions>. ... CE Software Inc. of

West Des Moines, Iowa, has announced

new pricing options for its SMTP

(Simple Mail Transfer Protocol) gate-

way for QuickMail. The QM-Internet

Gateway, which shipped in March, costs

\$495 for 10 users, \$1,095 for 25 users and

\$1,795 for 50 users. The company has

also released the QM-AOL Gateway, a

free piece of software that lets Quick-

Mail users exchange messages and files

with users of America Online; it is avail-

able at <http://www.cesoft.com>. □



MacTemp's has job openings all over the country. Here are just a few:

Atlanta, GA

Technical Support

Large telecommunications company in Norcross needs installation and support of MS Office. Temporary.

Job# 6863 \$17.50/hour

HTML Programmers/Designers

WWW firm in Buckhead looking for HTML programmer/designer. Photoshop, PageMill, WWW Weaver. Client wants to review URL addresses and resumes.

Job# 6689 \$17.50/hour

Chicago, IL

Help Desk Support

Temp-to-perm opening for Mac and PC/Windows support in Advertising Agency. Primarily MS Office with some graphics software. Novell experience helpful.

Job# 10453 \$17/hour

Cleveland, OH

Client Services Manager

Downtown Cleveland firm needs a dynamic self-starter with editorial background and a thorough working knowledge of the WWW needed to create Web sites and manage client relations.

Job# 925 \$35K/year

Tech Manager

Downtown Cleveland firm needs a technical manager that knows both PC and Macintosh platforms. Must know Windows NT, Apple System 7, MS Office, Netscape, HTML, CGI, Java, and Shockwave.

Job# 926 \$38-45K/year

Denver, CO

C++ Programmer

Must know comm toolbox, file system, open doc (PowerMac & 68k programming). Must have written 50,000 lines of code minimum. In Colorado Springs.

Job# 4648 \$30-40K/year

Detroit, MI

Computer Support

Management consulting company in downtown Detroit needs a PC/Mac user support person. Opportunity for advancement to Systems Administrator.

Job# 52083 \$35-45K/year

Houston, TX

Technical Support

Work for a "Big Six" accounting firm. Mac platform, troubleshoot h/w, s/w, work with PowerBooks. Some DOS/Windows. Support MS Office and TCP/IP.

Job# 3667 \$30-35K/year

Los Angeles, CA

Technical Support

In Creative and Admin. depts of architectural design firm. Support AutoCad, Networking, UNIX, graphic design software. Fast paced environment.

Job# 15399 \$18-25/hour

Miami, FL

Teleprocessing Analyst

Temp Position (1 mo.) to provide PC/Win h/w and s/w support. Must have DOS, Windows for Workgroups, and MS Office experience. cc:Mail administration a plus.

Job# 979 \$14-16/hour

Minneapolis, MN

Web Page Designer

Mac, Windows NT, and UNIX experience needed. Some HTML programming (HTML tagging, Java and CGI scripting). Manipulate and digitize video. Able to work in a team environment with confidence.

Job# 5801 \$20-30/hour

Technical Support

Technical support for a Windows-based company. Assist end users with software questions re: MS Office, MS Mail, and printing issues. Very large and fast-paced company. Must work well under pressure and enjoy troubleshooting issues.

Job# 5803 \$12-15/hour

New Jersey

Production Systems Analyst

Provide technical support for a prepress environment. Must be familiar with UNIX and proficient on the Macintosh. Good communication skills and the ability to work in a team is required.

Job# 52091 \$45-49K/year

New York, NY

Powerbook Masters

We have several help desk positions for Macintosh Technical Specialists ranging from Help Desk through internal ticket fulfillment. Mac OS expertise essential. PowerBook hardware installations key. Application support varies.

Job# 48539 \$25-30/hour

QPS Support Specialists

Mac OS technical specialists with experience in setting up, troubleshooting, and training end-users on QPS. Excellent application knowledge required.

Job# 48540 \$27/hour

Philadelphia, PA

Computer Technician

Permanent placement. Individual highly proficient in MS Office and WordPerfect. Interface with staff to solve problems on a daily basis. Proficiency with Windows 95 or Windows NT network necessary. Experience maintaining and expanding their LAN. Internet and WWW design helpful.

Job# 5976 \$25-35K/year

Programmer

Montgomery County. Looking for a temporary, part time FoxPro programmer. Could do evenings or take home. Need lots of database experience.

Job# 5970 \$30/hour

Computer Circulations Manager

Montgomery County. Full-time job consists of handling/maintaining all office computers. Currently two servers Mac and Novell. Upgrade s/w and h/w. Programming background helpful. Managing the circulation department. Oversees 20 employees and mailing requirements for three newspapers.

Job# 5971 \$24-40K/year

Philadelphia, PA (cont.)

Online Services Manager

Looking for a candidate on a temporary basis. Must have Client Relations/Management experience. Heavy knowledge of online services, WWW development experience a big plus. Networking and linking experience necessary.

Job# 5972 \$18/hour

Windows Programmers

Delaware County. Visual Basic and MS Visual C++ programmers wanted for young communications software firm. Looking to hire full-time and part-time programmers. Creativity and interface design important. Professionalism necessary. TEAM PLAYERS ONLY. Overtime or off-hours should be anticipated.

Job# 5973 \$30-60/hour

Macintosh Programmers

Delaware County. Metrowerks Code Warrior. A young communications software publishing company looking for full and part-time persons on a project-to-project basis. Interface design, creativity, and programming knowledge essential. PowerMac programming necessary.

Job# 5974 \$30-60/hour

Schaumburg, IL

Mac Programmers

2 senior programmers needed. Work in C++. Take DOS-based Internet software and develop a Mac version. Internet knowledge is helpful, though not critical. Long-term project.

Job# 10527 \$30-50/hour

Seattle, WA

Technical Writer

Technical writer for online work.

Job# 5534 \$25-40/hour

Software Testing

Software testing in Win NT environment.

Job# 5541 \$20+/hour

Content Coordinator

Content coordinator to build custom Access database.

Job# 5537 \$20-40/hour

Writer/Editor

Writer/editor for software documentation.

Job# 5551 \$25/hour

Software Project/Program Management

Manage a software development project.

Job# 5535 \$35-50/hour

Silicon Valley, CA

Software Localization Engineer

Localize software for DOS, Win, Mac & UNIX systems. Knowledge of debugging, quality assurance processes, version control, and translation-leveraging tools (IBM TM, XL8) required.

Job# 40651 \$40K/year

Macintosh Programmers

High-tech computer co. in need of several Mac programmers. Using C++, MPW, and Code Warrior. Need to know QuickTime, QuickDraw, & Drag & Drop Tools/Menus. Some graphics knowledge preferred.

Job# 40882 \$25-40/hour

Programmer

Develop communications software to interface with modems and ISDN connections. Working in C/C++ and Metrowerks Code Warrior for the Mac. Must know communication toolbox and be communications savvy.

Job# 40875 \$50-75K/year

Technical Support Representative

Sunnyvale manufacturing co. in need of Mac savvy support specialists. Good phone/troubleshooting skills. Experience with XPress, Photoshop, & Premiere, FileMaker Pro, & Excel. Possible temp-to-perm positions.

Job# 40896 \$17-20/hour

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technical positions available

Macintosh Specialist

A Mt. View entertainment co. in need of a tech with Windows NT, Sun and UNIX experience as well. Some HTML & CGI. Manipulation of video a plus. Friendly, outgoing, good sense of humor preferred.

Job# 40967 \$40K/year

Macintosh Support Specialist

A Palo Alto law firm is looking for a tech to provide networking, h/w and s/w support. Must be good with Word and Excel. Good communication skills and troubleshooting ability needed.

Job# 41010 \$20/hour

Technical Support Engineer

A Santa Clara software co. is looking for emulation support. The person will be answering tech inquiries by phone, email, and fax. Must have knowledge of Mac, DOS and Windows 95.

Job# 41020 \$15/hour



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A glorious heresy

When newly appointed Apple Chief Operating Officer Marco Landi stepped into a room full of reporters at PC Expo in New York last month, he entered alone. Nothing unusual in this for mere mortals like us. But at Apple, where history dictates that even the highest-level executive not take a step without a smooth-talking PR handler in tow, Landi's entrance was a refreshing bit of heresy. Added to this unorthodox move was Landi's gracious one-on-one introductions to each news person in attendance. Charm and humility. All-new traits at the all-new Apple.

We could dismiss Landi's approach as mere style if it weren't for his other, far more profound heretical revelation. The man believes Apple should be concerned more about profits than it is about the Mac.

Cries to take Apple's No. 2 executive and burn him at the stake will likely be heard in the streets of Cupertino. After all, without the Mac, Apple would cease to exist. Thinking about profits before you consider the

Mac is, well, like contemplating heaven without dealing with the deity.

Still, we think Landi might be on to something. Without improved profits Apple will be forced to scale back its R&D, marketing and customer support. Without those key but nonrevenue centers in full swing, the Mac will eventually slide into oblivion, and with it, the company. In short, Apple needs money more than it needs the Mac.

The previous holder of the COO title claimed profits were his mantra as well. But unlike Landi, Michael Spindler never went so far as to decree them ahead of the Mac. That's because Spindler grew up in the Apple culture that saw the world through the prism of the Mac's place in computing history. He couldn't fathom an Apple without the Mac. Landi can.

Landi is not by any means advocating excommunicating the Mac from Apple. But as a company outsider his thinking is free from corporate cultural constraints. What he has to say may upset us, but we had better listen. What is heresy today may be dogma tomorrow. □

THE SECOND DECADE HENRY NORR

AppleScript has a role but not on the Frontier

AppleScript is by no means the only instance in which Apple has stepped into territory already staked out by third-party developers, but it's one where the lines are drawn with particular clarity.

That's largely because the principal third party — Dave Winer, co-developer with Doug Baron of the Frontier scripting system — hasn't taken Apple's entry into his market lying down. For years he has argued — in his "DaveNet" online column; in e-mail to other developers, journalists and Apple executives; and most recently in his keynote at last month's MacHack '96 conference — that Apple is harming its developers, its customers and itself by wasting resources on features better delivered by third parties.



version of Frontier, 4.0.1, is native and up to 45 times faster. With 646 verbs, it has a far wider range of capabilities. It offers multithreading, menu-sharing, a debugger and a built-in object database — all features AppleScript lacks. It even lets users edit and run AppleScripts.

For the last year Winer has given away Frontier at no cost, but he's continued to extend and polish the product, focusing particularly on Web-site management. In fact, after Quarterdeck Corp.'s WebStar, Frontier has probably done more to make the Mac a viable Web server. Apple, Claris Corp. and BMW are among the companies using it.

A modern-day MacroMaker

In short, great stuff. But does that mean Apple shouldn't bother re-invigorating AppleScript? It all depends. If the company's aim is to deliver a Frontier-class

product, then Winer's right, it is making a big mistake because the product already exists. If Apple wants such capabilities with its servers or high-end systems (not a bad idea), it should license Frontier.

What Apple should be building is something different: a high-performance, low-overhead and above all *easy* way for average users, even those with no programming or scripting experience, to automate their work. Frontier is not that. Neither is the current version of AppleScript, but I'm hoping Version 2.0 will be.

That won't eliminate the issue of competition. In addition to Frontier, CE Software Inc.'s QuicKeys and WestCode Software Inc.'s OneClick would be affected. But there's much Apple can do to help such developers survive and prosper. First, it should deal with them as partners — soliciting their input, informing them of its plans and sticking to its commitments. It should license pieces of their technology — at a fair price. It should work with them to define interfaces, including an updated Open Scripting Architecture, that make it easy to plug in enhancements to Apple's baseline technology. And it should help market the solutions they produce as extensions of its own.

What it can't do is stop raising the bar in OS capability. □

Henry Norr, editor emeritus of MacWEEK, welcomes feedback in the MacWEEK forums on CompuServe or at henry_norr@macweek.com.

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LETTERS

Worrying about MMX

Henry Norr's column "PPC doesn't need MMX" (06.17.96, Page 26) is the first one I've read that really scares me. I barely considered going to Wintel for this new MMX computer system. I bought a PowerCenter 132 from Power Computing Corp. because I work with Adobe Photoshop, graphics and sound, and the PowerPC is currently the superior chip for that. In the late 1980s and early 1990s, the Mac had the best OS but was far behind Wintel in processor speed. Now the OS margin has narrowed significantly, but the Mac has a noticeable processor speed advantage. If that disappears, who knows?

Perhaps we have even more of a life-or-death situation for the Mac OS camp than Norr implies. Just today, a friend who's looking for a new Intel-standard computer was asking me about the Mac because he's interested in doing some basic video digitizing and editing. I told him the Mac is the platform of choice. Now I wonder. I don't regret my purchase yet, but given a couple years, I just might.

Andrew Fiore
Durham, N.C.

Microsoft's install OK

In his letter to MacWEEK (06.17.96, Page 27), Robert Howe makes an assumption that is incorrect. He thinks that Microsoft's newer upgrade plan will require a reinstall of the old product if it is not still on the system. However, this is not true. If it is not installed, then he should only have to put the Install disk for the old version in the drive so that the newer Install can check it. This is pretty much (finally) becoming the industry standard on the PC side. It saves a lot of install headaches if you have to wipe your drive.

Tom Stangl, support engineer
InSoft Inc.
Mechanicsburg, Pa.

Hybrids help Mac

Bill Dugan, the "Macintosh high priest" at MacPlay, wrote that moving to hybrid software SKUs would be "madness, probably leading to the death of the Macintosh platform" (06.10.96, Page 29). He said Mac users would have trouble finding the "one out of 10" items on the shelf that were Macintosh in a generic aisle.

In the midst of this hysteria he seems to have missed the fact that the industry is moving toward platform-transparent software and data files. Perhaps he just skims his issues of MacWEEK. Can you say Java and OpenDoc? How about CodeWarrior and PowerPC Platform? How does a soft-

ware company support a computer that can run multiple operating systems? How do Dugan's "bean counters" deal with it? They just stop worrying about it. After all, as long as they sell software units, what does it matter which platform as long as they are only writing code once?

Does Dugan believe that PC software firms are going to create Mac-only units of their software? There's too much cost involved. If they are going to play in the Mac market, they will only give it lip service: a tag on the box, a few Mac-specific installation instructions and some technical support.

If I were Dugan, I'd fire the bean counters at MacPlay and start looking for a public relations company to come up with a name for the 1990s. Maybe JavaPlay?

Brian Michael Ross, CEO
Saracen Communications Inc.
Ventura, Calif.

Super investment

I was thinking about the local computer superstores. They don't sell a lot of Macs, and the salespeople have very limited knowledge of them. One local store, Future Shop, has drastically reduced its Mac section. This got me to thinking. Imagine this: Apple invests a substantial amount of money in one of these superstore chains. Enough money for them to have a say in how the stores are run. Wouldn't it be interesting if they could actually impose a fair representation of Macs (and software) in those stores? Better still, what if they had knowledgeable salespeople as well. What a concept! What if Price Club was owned by Apple?

A Quebec businessman (Pierre Paladeau) became very rich and very powerful because he had the good idea of buying businesses that actually needed each other to survive. Of course, this approach is going to get the traditional dealers mad at Apple. But these days, I'm not sure that many clients would mind. There are many good consultants that can help individuals or companies with that extra bit of information they need. Apple could even publicize local consultants in those superstores.

Apple needs to start moving more boxes, and a better distribution and representation might be just what it needs.

Thierry Daigneault, president
Macapa Software, Quebec

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THE MAC MANAGER DON CRABB

Apple needs a lesson in Customer Service 101

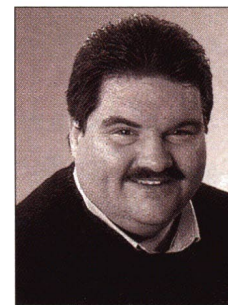
I think Apple CEO Gilbert Amelio has it right. If the company's recovery goes according to plan, we'll all look back and wonder, "What was all the fuss about?"

But that's also the rub, isn't it? What if the recovery doesn't go according to plan? What if things get worse? A lot worse.

It's possible that Amelio's new divisions and executives won't be able to push Apple down the right road. Let's face it, it's happened before. The company has announced lots of nifty-sounding strategies before. And we all know the results of those old promises, plans and reorgs.

Babkes. Nada. Zippo. Zilch.

What makes any of us think this time will be different? Because this time Apple claims it knows that execution is as important as ideas; and that execution starts with a true customer service attitude and approach. Too bad only part of Apple knows this.



One step forward ...

One part of Apple where both execution and customer service are coming together is Heidi Roizen's Developer Relations Group. While not ecstatic, developers are happier and better off now than they've been in years. All indications are that this new relationship will only get better as her group delivers more of what developers are requesting.

Other groups inside Apple ought to be able to meet the needs of their constituencies, too, but it's clear that a lot of the old attitudes will have to be swept away by the new bosses and their newly enfranchised managers.

No one should focus more on customer service than those who sell Apple's products. Or so you'd think. But witness one customer's recent encounter with Apple's

sales attitude, then tell me whether it needs an adjustment.

A Mac manager I know at a small college decided to buy 20 7200/75s for his new multimedia lab. Pretty simple scenario, eh? He discovered that a mail-order house sold them for \$995 each.

... another step back

He then calls his Apple Education sales rep because he likes doing business through Apple. His rep says, "I'm sorry, that model is not in stock." The Mac manager responds, "Mail-order houses have thousands of them." And what does Apple's sales rep say? "Buy from mail order then."

Bad answer. If I were your boss you'd be waiting in an unemployment line. What were you thinking? This guy's your customer. He wants to spend money on your product. Your job is to help him get it.

Frustrated, our friend then tries to buy the Macs from the mail-order house. He calls them and is told, "We can't sell to education institutions without special written permission from Apple."

Ultimately, he gets the written permission a week later and then finds out that if he wants to buy from other mail-order vendors he must go through the same rigmarole again. For each vendor.

If Amelio expects any of his best-laid plans to work, he's got to stop policies and attitudes that permit this kind of customer disservice. Immediately. Otherwise Apple's latest *Sturm und Drang* will just be just that, and nothing else. □

Don Crabb welcomes comments at his Internet address decc@cs.uchicago.edu. You can also check out his home page at <http://cs-www.uchicago.edu/~decc/>.



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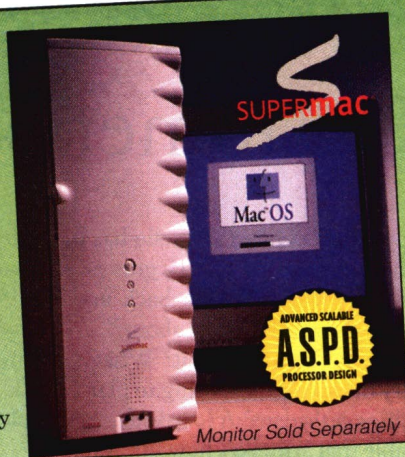
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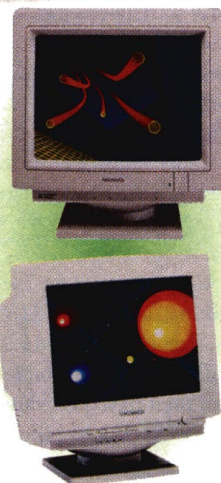
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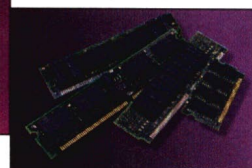
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DAYNA Bluestreak 100BTX Hub	1561.86
FARALLON Air Dock infrared connector	64.68
FARALLON Ether10-T Starlet/8 hub	144.68

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TEXAS INSTRUMENTS microLaser Pro/8	1106.95

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GLOBAL VILLAGE PowerPort Platinum Pro PC Card	487.16
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MOTOROLA BitSURFR Pro ISDN terminal adapter	353.80
PRACTICAL PERIPHERALS 28.8 V.34 external mini-tower w/fax	159.94
US ROBOTICS Courier V.Everything	273.51
US ROBOTICS Courier I-modem	632.84

Storage Solutions/CD-ROM drives

FWB HammerCD 4X CD-ROM recorder	1882.36
FWB HammerJaz 1000 PCI	939.34
HI-VAL 8X SoundTastic CD-ROM Kit	289.73
IOMEGA Zip drive 100MB SCSI external	199.00
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MICRONET Advantage 1GB drive featuring "Jaz" external	566.68
MICRONET Advantage 1GB "Jaz" disk	116.38
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SYQUEST EZFlyer 230MB external	286.85
SYQUEST EZFlyer 230MB cartridge	29.47

SYQUEST EZ135 external SCSI	119.23
SYQUEST 135MB EZ135 cartridge	19.45

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ADESSO Tru-Form extended keyboard	84.76
AGFA Arcus II with full version Adobe Photoshop	1995.00
AGFA StudioScan IIsi	698.32
ALPS Desktop GlidePoint	69.84
ALPS GlidePoint Keyboard	115.48
CONNECTIX Color QuickCam digital video camera	223.11
EPSON ES-1000C color flatbed scanner	737.82
EPSON ES-1200C ProMAC color flatbed scanner	1122.02
MICROTEK ScanMaker E3	379.77
NIKON Super CoolScan film scanner	1943.58
NIKON LS-20 Super CoolScan II	1165.32
RELISYS Scorpio Infinity	401.52
UMAX Vista-S6 SOHO	389.23
UMAX Vista-S12 MACPRO2	838.53
VISIONTEK SCSI Adapter for PaperPort VX	63.48
VISIONTEK PaperPort VX	274.94

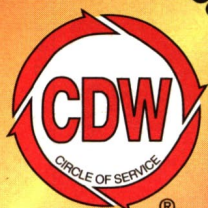
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SIMPLE TECHNOLOGY Power Mac 9500 8500 7600 7500 16MB	249.77
VISIONTEK Power Mac 9500 8500 7600 7500 32MB	465.31
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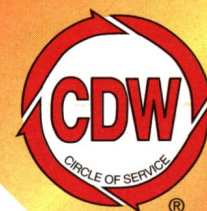
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ADOBE Illustrator V6.0 upg 5.X to 6.0, CD	89.96	MACROMEDIA Director V5.0 CD	817.78
ADOBE PageMaker V6.0 (3.5" + CD)	545.78	MACROMEDIA Director V5.0 upgrade CD	374.37
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CLARIS Emailer	41.73	MICROSOFT Visual FoxPro V3.0 upgrade, CD	265.72
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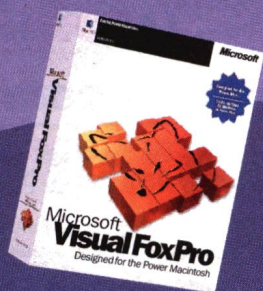
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REVIEWS

APPLE SERVERS II

Next week we'll detail how Apple's Workgroup Servers 7250/120 and 8550/132 perform as Web servers.

MACWEEK 07.08.96

Evaluations • Benchmarks • Testing

PAGE 35

Apple Workgroup Servers deliver improved value

By J.W. Davis

Earlier this year, Apple introduced the newest members of its successful Workgroup Server family: The 8550/132 and 7250/120. Built upon the latest PCI Power Macintoshes and incorporating new versions of AppleShare, Open Transport and third-party applications, these servers promise improved functionality and performance while maintaining Apple's long-standing ease-of-use edge.

Based on our evaluation of the servers, Apple has largely succeeded. Although their performance and design enhancements are modest, the new Workgroup Servers are a good value and still the simplest file servers you can find.

The goods

The \$3,719 WS 7250 offers a 120-MHz PowerPC 601 processor, 256-Kbyte Level 2 cache, 16 Mbytes of RAM, a 1.2-Gbyte hard drive, three PCI slots, built-in Ethernet and a quadruple-speed CD-ROM. The \$6,879

However, the PCI-based 8550 and 7250 are still limited in security and administration.

WS 8550 includes a 132-MHz PowerPC 604 processor (which can be upgraded via a processor card), 512-Kbyte Level 2 cache, 24 Mbytes of RAM, a 2-Gbyte hard drive, three PCI slots, built-in Ethernet and a quadruple-speed CD-ROM. An optional DAT drive provides integrated backup capability for the 8550 for an additional \$1,100.

Unfortunately, Apple doesn't seem to be incorporating its Network Server design experience into the Workgroup Server line. Unlike Compaq Computer Corp. and Hewlett-Packard Co., which offer low-end versions of their departmental servers for workgroup environments, Apple is basically repackaging its standard desktop units at higher margins. While these machines will prove just fine for many environments, the lack of server-oriented features such as hot-swappable drive bays will avert some potential clients.

Both servers, when purchased in the AppleShare configuration, come bundled with a broad collection of software, including AppleShare 4.2.1, Apple RAID 1.1, AppleShare Client for Windows, Sanitini Consulting & Design Inc.'s Server Manager 3.2, Apple Remote Access MultiPort Server and the Apple Solutions CD 2.0 (see story, next page).

The setup

As with previous Apple server offerings, novice and expert administrators alike will find installation and configuration quick and painless. AppleShare Admin isn't flashy, but its simplicity translates into quick and easy administration. Creating users, groups and shared Mac volumes is an easy point-and-click experience. Version 4.2.1 thankfully

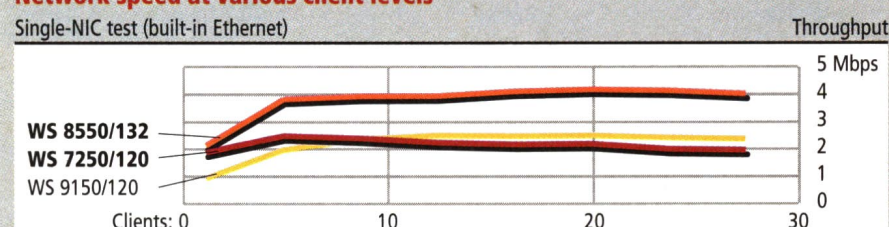


Apple Workgroup Servers 8550 and 7250

Apple's new PCI-based Workgroup Servers offer better price/performance ratios than previous models; the 8550 almost doubled throughput vs. the older 9150; the 7250 had throughput similar to the 9150 at much lower cost.

Network speed at various client levels

Single-NIC test (built-in Ethernet)



Test configuration: The WS 8550 was equipped with System 7.5.3, AppleShare 4.2.1, 24 Mbytes of RAM and a 2-Gbyte hard disk. The WS 7250 was equipped with System 7.5.3, AppleShare 4.2.1, 16 Mbytes of RAM and a 1.1-Gbyte hard disk. The WS 9150 was equipped with System 7.5, AppleShare 4.0.2, 16 Mbytes of RAM and a 1.1-Gbyte hard disk.

does away with the all-but-incomprehensible cache settings seen in previous releases; now, AppleShare simply uses all unreserved system memory for caching. Experienced administrators should be able to put new servers into production within an hour; first-timers may take a little longer, but neither should have significant problems.

Administrators do pay a price for such simplicity, though; AppleShare offers a relatively limited feature set. With only three levels of privileges and no file-level permissions, AppleShare lacks the flexible

security handling offered by Novell NetWare or Microsoft Windows NT. And while AppleShare allows basic control of password length, password expiration and account lockout, it doesn't handle more sophisticated tasks such as limiting account log-ins to certain hours, tracking password histories, or integrating with directory services and domain models offered by other network operating systems.

We'd also like to see AppleShare support AppleScript-based log-in scripts, sim-

See Servers, next page

MovieFlo' 2.0.2 warps video with fluid dynamics

By Kennedy Grey

Since 1994, The Valis Group's MovieFlo' has been one of the best-kept secrets of Macintosh digital video creators. Rating high on the "How'd they do that?" scale, MovieFlo' is the best solution for creating warp deformations in static or dynamic Mac images, especially if you want to maintain the original file's quality.

If you have ever wondered how you could stretch moving legs into stilts, bulge eyes into bowling balls or make a skyscraper do the twist, MovieFlo' is the answer.

Flo' family and neighbors

The \$699 MovieFlo' 2.0.2 is the flagship product within Valis' Flo' line of free-form plasticity software. MovieFlo' performs deformation effects on multiple lay-

Sophisticated and intuitive digital video tool produces stunning output.

ers of QuickTime video and PICTs (with alpha channels) or both, while its sibling products, the \$129 Flo' and \$499 MetaFlo', work with single-layer still and multiple-layer still images, respectively.

Each of the Flo' products contains what Valis calls a Fluid Dynamics rendering engine, which distorts whole or pieces of images at ex-

remely high quality. This core engine simulates how an image might behave if stretched on a rubber canvas. The rendered images reflect this: MovieFlo' effects are extremely clean. You simply cannot locate the edge of the selected area that you distorted, even upon magnification.

MovieFlo's competitor, Elastic Reality from Avid Technology Inc., is a competent *See MovieFlo', Page 38*

SCORE CARD

WS 8550/132



Apple

Price: \$6,879

Hits: Improved performance; simple to set up and keep up; excellent bundled software.

Misses: Pricey; lacks functionality of other AFP (AppleTalk Filing Protocol) solutions; most bundled applications good for only five or 10 users.

WS 7250/120



Apple

Price: \$3,719

Hits: Simple to set up and keep up; excellent bundled software; good price/performance ratio.

Misses: Lacks functionality of other AFP solutions; most bundled applications good for only five or 10 users.

Key ◆◆◆◆ Excellent ◆◆◆◆ Very good ◆◆◆ Good ◆◆ Fair ◆ Unsatisfactory

Servers

From previous page

ilar to the batch files that Windows workstations run when logging into NetWare or NT servers. While the server's bread-and-butter functionality is adequate for the majority of environments, some administrators will need to look elsewhere for a solution.

Performance

The 7250 and 8550 incorporate a range of new technologies that offer the promise of much-improved file server performance. AppleShare 4.2.1 incorporates a native file server engine and improved caching. Open Transport 1.1 offers native networking and AppleTalk multihoming, which is the capability to support multiple network interfaces simultaneously. The boxes themselves offer newer, faster processors and a PCI bus.

To determine whether the servers live up to their promise, we tested them using Ziff-Davis Benchmark Operation's NetBench 4.01, a file server benchmark that emulates typical network use at extremely high loads. We compared the servers, each equipped with a built-in Ethernet NIC (network interface card), with the previous top-of-the-line Apple product, the WS 9150/120, a NuBus-based server that Apple is phasing out. Testing on the three servers was limited to 28 clients because of problems obtaining reliable data with increased client loads. (MacWEEK will test the servers with multiple NICs for a future review.)

The WS 7250, with a 120-MHz PowerPC 601, peaked at roughly 2.5 Mbps and performed less well overall than the NuBus-based 9150, also with a 120-MHz 601 (see chart, previous page). Not surprisingly, the

Server bundle has something for everyone

Apple continues to add value to its line of Workgroup Servers by bundling them with a wide array of software. The software that ships with the Workgroup Server 8550/132 and 7250/120 should come in handy for most network managers. Unfortunately, most of the applications have five- or 10-user licenses only, and thus may require additional purchases to be useful for anyone but small companies.

Server Manager 3.2 is a fine supplement to AppleShare 4.2.1's management tools. This package from Santorini Consulting & Design Inc. allows remote administration of multiple AppleShare servers. It adds monitoring functions, which can be used to alert an administrator or run an AppleScript when disk space is low or server use is high. Like AppleShare 4.2.1, Server Manager is a breeze to install — just drag, drop and go. The interface is attractive and relatively straightforward, although some features, such as cache management, seem defined for previous versions of AppleShare.

Server Manager is great, but we wish Apple would go one step further and in-

clude Santorini's entire Server Manager Bundle, which features auditing, accounting, disk quotas and security logging — all important tools for the professional network administrator (see 10.30.95, Page 29).

A handful of other software is included on the server CD. New to the bunch is the ARA MultiPort Server software, which, in combination with an external modem (or several external modems with an optional serial-port card from Keyspan), provides remote-access capabilities. Other software on the CD will be familiar to those who purchased Workgroup Servers in the past. The goodies include Apple RAID 1.1, which offers a simple way to create software-based arrays, and Dantz Development Corp.'s Retrospect Remote 3.0, which still sets the standard for simple yet powerful network backup for DAT-equipped units. The CD also includes AppleShare Client for Windows software, which lets Microsoft Windows 3.1 clients connect via AppleTalk to AppleShare servers. Unfortunately, no client software is included or available for Windows 95 or Windows NT users.

Apple also tosses in its Solutions CD 2.0, which includes a number of end-user applications. New to the collection is Datawatch Corp.'s Virex 5.6 and net-Octopus 1.2, which provide virus protection and inventory management, respectively, for Macs and Intel-standard PCs. The AG Group Inc.'s Skyline/Satellite 1.1 is also included for network monitoring and analysis. 4-Sight Fax LE 3.1 from 4-Sight L.C. provides solid client-server faxing for machines on your network — a real, and often underexploited, productivity boost.

The CD also features some updated versions of software bundled with the last round of Workgroup Servers. Among them is Wave Research Inc.'s FileWave 2.16. This application lets administrators distribute software and keep machines synchronized, making it ideal for lab environments or companies with many portable users. Rounding out the bundle is Version 3.5 of Now Software Inc.'s Now Contact and Now-Up-to-Date, and IT Design USA's Viper Instant Access 2.0, a small database application. — By J.W. Davis

8550 performed better: It peaked at 4.25 Mbps and maintained nearly double the throughput of the 9150 throughout testing.

Conclusions

For many workgroup environments, the Workgroup Server 7250 and 8550 are solid solutions, offering tremendous ease of use and a good value, especially if any of the bundled applications fill a need. However,

in corporations, where the workgroup was defined and standards are all the rage, the Workgroup Servers' limitations in security and administration will hurt them compared with other offerings, such as the almost easy-to-use Windows NT.

While neither of the new workgroup servers offers a breathtaking performance increase, the real story is that they offer better price/performance ratios than previous

models. This is particularly clear with the lower-end 7250. While it showed slightly slower performance than the 9150, the difference is less of a problem when you consider the price: The 7250 is almost \$5,000 less than the \$8,709 9150.

Apple can be reached at (408) 996-1010 or (800) 538-9696; fax-back (800) 462-4396; <http://www.solutions.apple.com/papers/wgervers.html>. □

REVIEWS IN BRIEF

FrameMaker-to-HTML conversion flexible, slow in WebMaker 2.2

WebMaker 2.2



Users of Adobe Systems Inc.'s FrameMaker who need to turn long documents into multipage Web sites will find a friend in WebMaker 2.2, a FrameMaker-to-HTML utility from Harlequin Inc. The \$99 program creates a site complete with navigation tools to tie together your content, which is divided into pages. It's slow, however, and its interface leaves something to be desired.

Intelligent guesses

WebMaker automatically determines the structure and look of your Web site through its new RapidRules feature, which applies formatting tags written in the program's complicated, proprietary markup language. Fortunately, RapidRules does a good job of automatically creating a set of rules that will

do most of what you need. Since RapidRules assumes a lot based on character and paragraph tags defined in FrameMaker, it's important to design and use your tags thoughtfully before converting the document.

Long documents, such as manuals, raise interesting issues when you move them to a Web site, such as deciding how to divide the pages. WebMaker provides full control of the hierarchy of your site, automatically creating separate, complete pages for each section. Further, WebMaker automatically inserts Java- or text-based navigation tools on each page.

WebMaker also exports graphics, which become GIFs; equations, which become either GIFs or HTML equivalents; and tables, which become HTML 3.0 tables. If you take full advantage of FrameMaker's advanced features, such as Cross Referencing, WebMaker can automatically create context-sensitive links from one page to another. Also, experienced FrameMaker users

who are comfortable with the program's conditional text can create documents that include separate information for both print and electronic form.

Speed and interface

WebMaker's weakest points are its performance and interface. The application looks a lot like a programming tool, which may intimidate some novices. While the RapidRules feature automates many important decisions, you'll need to delve into the program's esoteric language and dialog boxes to override any of its decisions. Ideally, we'd like to see a new WYSIWYG interface

based more on FrameMaker's paragraph- and character-formatting controls.

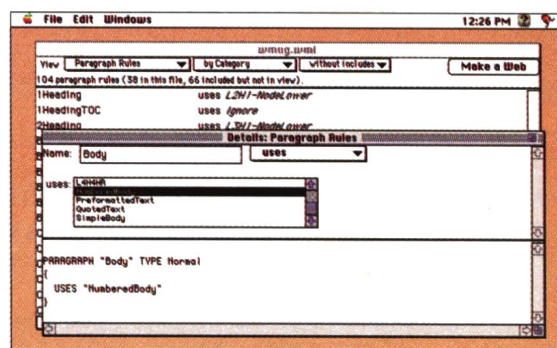
The program, which is not Power Mac-native, creeps through the process of creating a Web site and is even slow in performing simple actions. Harlequin promises a native update this summer; in the meantime, expect to do some waiting once you've told the program to create a Web site.

As befits a publishing tool of the Internet Age, the 3.8-Mbyte WebMaker is available only via Harlequin's Web site. Before purchasing the program, you can download a trial copy that lets you produce sites of up to five pages. Harlequin's site also hosts documentation in a variety of forms.

Conclusions

Despite its difficult interface and slow performance, WebMaker is a good program. It may have some competition later this summer from FrameMaker's originator, when Adobe releases its HoTaMaLe tool. For now, though, those who need to get long, complex, hierarchical documents into HTML will be hard pressed to find a more effective solution.

Harlequin Inc. of Cambridge, Mass., can be reached at (617) 374-2400; fax (617) 252-6505; web@harlequin.com; <http://www.harlequin.com>. — By Ben Long



Harlequin WebMaker 2.2 converts each paragraph style in a FrameMaker document to a corresponding HTML style. Styles are automatically created with the RapidRules feature.

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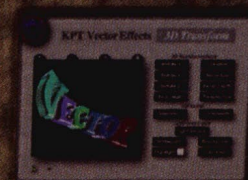
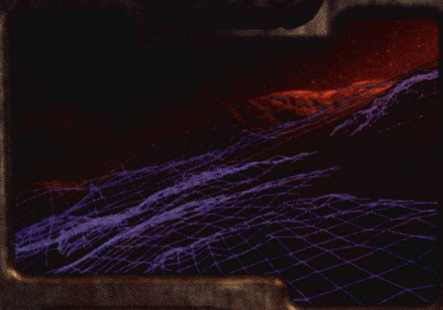
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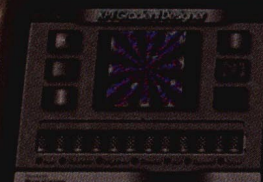
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REVIEWS FORUM

PaperPort Vx SCSI adapter

The biggest drawback to the \$299 PaperPort Vx, Visioneer Inc.'s second Mac incarnation of its scanner- and document-management system, is its frustrating reliance on a serial-port connection. But we're in luck: The long-promised SCSI adapter for the PaperPort Vx has arrived, and for most users, the \$69.95 device is a must-buy.

The adapter, which plugs into the Mac's 25-pin SCSI port, is attached to a cable that connects to the scanner's AnyPort, a proprietary combination serial-and-SCSI port. Installation is simple: Connect the adapter to your Mac, select a SCSI ID, attach the adapter's cable to the PaperPort Vx and install the software.

All should go well — as long as you don't experience a SCSI chain-related problem. Visioneer glosses over SCSI problems in the brief documentation, stating only that a terminator may be required if the adapter is the last device in a chain. We're happy to report, though, that the adapter was consistently reliable when placed first in the SCSI chain.

In addition to freeing up a port, the adapter also delivers a slight performance benefit. Depending on your Mac's speed and the scanning resolution you choose, the PaperPort Vx with SCSI adapter scans up to twice as fast as without the adapter. In our tests, high-resolution OCR scans on older Macs — the slowest kind of scan — showed the greatest improvement.

While we're usually the first in line to demand faster performance, speed is inconsequential if you need to reconfigure your hardware each time you want to use a product. With this adapter, that's no longer the plight of PaperPort Vx users.

The adapter also works with Hewlett-Packard Co.'s ScanJet 4s scanner.

Visioneer Inc. of Palo Alto, Calif., can be reached at (415) 812-6400 or (800) 787-7007; <http://www.visioneer.com>. — By Dale Coleman

PageMaker 6.0.1 update

Many observers characterized Adobe PageMaker 6.0 as the least-polished PageMaker release ever. Version 6.0.1, which is available now free to registered users, should go a long way toward dispelling that perception.

For the most part, the upgrade is concerned with bug fixes, as the 0.1 increment in the version number would suggest. However, Version 6.0.1 also contains some significant new features, including full-blown support for Apple's ColorSync 2.0 color-management system.

When PageMaker first appeared, Adobe stressed that PageMaker's color-management architecture was modular and open. Now we're in a position to verify that claim, and we're pleased to do so. PageMaker is arguably the first mainstream application to support ColorSync

fully, and we experienced a few pleasant surprises in working with it.

Those who have used Eastman Kodak Inc.'s Color Management System (KCMS) inside PageMaker have almost certainly been frustrated by the lengthy wait they experienced the first time they opened KCMS. With ColorSync, there's no waiting. Another advantage that ColorSync has over the current KCMS is that ColorSync uses industry-standard ICC-format device profiles, so you don't have to rely on Kodak as the sole source of device profiles. In fact, a slew of third-party profiling tools let you create custom ICC profiles for specific input and output conditions.

A further difference is that Kodak's system is optimized for images: It strives to maintain the relationship between colors in an image rather than literally reproduce those colors available in the output device's color gamut.

With ColorSync, PageMaker lets you choose a rendering intent best-suited to the source material. The options are: Image for images, which works in similar fashion to KCMS; Graphics for presentation graphics, which simply tries to produce the brightest, most saturated colors possible on the output device; and Colorimetric for spot color, which tries to reproduce colors exactly on the output device.

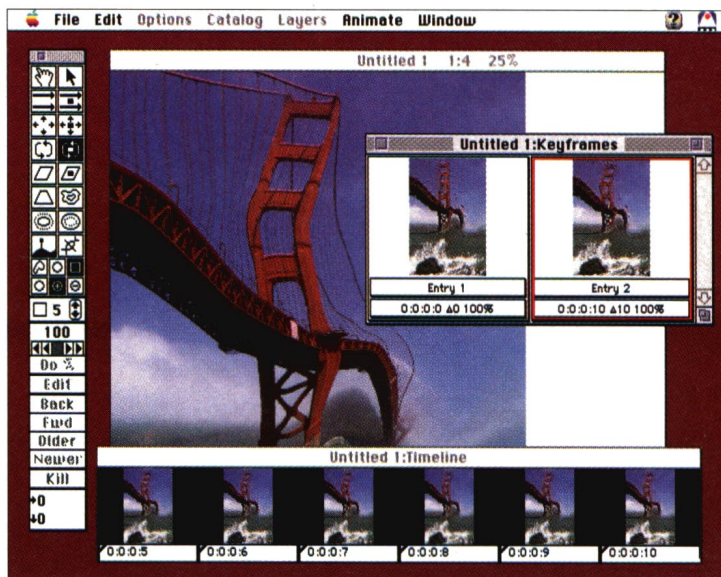
There's little doubt, however, that KCMS also has some advantages, such as its handling of Photo CD images. Thanks to PageMaker's modular CMS architecture, you get the best of both worlds because you can choose which CMS to use for each element. One CMS is always the default, but you can override it when you place an element (or any time afterward); simply change the element's CMS source. Even if you've chosen ColorSync as the default CMS, for example, Photo CD images will always call KCMS.

For the first time, we were able to obtain excellent results using KCMS to import Photo CD images into Lab color and ColorSync to print them. PageMaker 6.0.1 is really the first application that allows interoperability of color-management systems. It also looks like a strong platform for building new CMS-based work flows, which will be more necessary in the future as more printed images come from RGB image sources, such as scanners and digital cameras.

Still, there are shortcomings. PageMaker can't use color management on EPS files, only on TIFF and RGB JPEGs. It still lacks a way to convert all images to CMYK prior to printing; you have to convert them one by one. Careful scripting can help here, but we suspect it's beyond the abilities of most PageMaker users.

Overall, though, Version 6.0.1 is an impressive upgrade. This is the program the company should have shipped as PageMaker 6.

Adobe Systems Inc. of Mountain View, Calif., can be reached at (415) 961-4400; <http://www.adobe.com>. — By Bruce Fraser



As distortions are applied in The Valis Group's MovieFlo' 2, keyframes are made to create the high-quality tweening animation, as shown here in this earthquake simulation of the Golden Gate Bridge.

MovieFlo'

From Page 35

morphing package, but it uses a standard linear interpolation engine that causes artifacts and tearing in all but the mildest warp effects.

MovieFlo' 2, which now requires a dongle, ships with Flo' Filter, an Adobe Photoshop plug-in that works in an unusual way. Photoshop and MovieFlo' run simultaneously; Flo' Filter passes data back and forth between them. You can open an image in Photoshop, select the Flo' Filter to pass it to the Flo' application, distort it using the full set of Flo' tools and send it back to Photoshop.

New features

A new Region Of Change tool defines curved regions in a unique way. This tool, based on new curve mathematics, is used to select areas using arcs instead of splines or Bezier curves. The arcs are just as smooth as splines or Beziers but feel more natural when defining organic-shaped areas — you won't have to teach your mouse to break dance to get the curves just right as you do in packages such as Adobe Illustrator. After you define the arcs, you can add and manipulate points on them like any Bezier curve tool.

The package also lets you import a file to use as an overlay mask — handy if you're trying to squeeze a little boy into the shape of a soda bottle. The masking options appear on the tool bar and provide thickness and opacity controls.

Jumping to warp

For all its sophistication, MovieFlo' is incredibly intuitive. Its tools fall into the categories of whole-image or partial-image

manipulation. The tool palette provides standard Arrow, Crop and Hand tools, as well as Rotate, Skew, Reshape and Mask tools for local and global distortion. A convenient Distortion Navigation box in the tool palette lets you move through keyframes, which can be edited or undone, backward or forward.

Selecting an area within a still or movie frame imbues a Sweep Second Hand arrow on the axis of the center of the distortion area you selected; rotating the arrow right or left creates a high-quality preview of your distortion. Once you're happy with the effect, selecting Command-Y creates a keyframe, which sends you onto the next distortion.

Return to render

After you've created all your keyframes, you can make a fast QuickTime preview or render it to a full-frame QuickTime or numbered PICT file. The Render Size and Resolution dialog box provides width and height options by dots per inch, pixels or inches.

Rendering times vary widely with the compressor-decompressor and machine used, but our 8500/120 Mac rendered full-screen frames about every four to six minutes — pretty snappy for such a high-quality finished product.

Documentation is thorough. The included CD offers many sample images and movies as well as a decent tutorial. Technical support is excellent, particularly for a small company; our call was quickly returned by one of the programmers, who was helpful and courteous.

Conclusions

MovieFlo' 2 is a fine value. Its unique style of effects will inspire even the most jaded Macintosh artist. Whether the program is used for high-quality color print images or professional animation and digital video, this package provides stunning output, decent speed and options not available elsewhere.

The Valis Group of Tiburon, Calif., can be reached at (415) 435-5404 or (800) 825-4704; fax (415) 435-9862; valisgroup@aol.com; <http://www.valisgroup.com>. □

SCORE CARD

MovieFlo' 2.0.2



The Valis Group

List price: \$699*

Hits: Generates high-quality image distortions; "hot links" to Adobe Photoshop; excellent selection of tools and masking capabilities.

Misses: Drab interface.

*Upgrades from MovieFlo' 1.0, \$199. MetaFlo' and Flo' users can upgrade by paying the difference between the price of their product and MovieFlo' 2.

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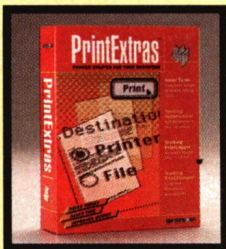
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Pool scene created and rendered entirely in Bryce 2. Golden diver modeled in Fractal
Design Poser, imported as a DXF model then rendered in Bryce 2. Duckie and sunglasses
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Printer Enhancements



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Working PrintStamper: labels each document automatically with pertinent information

Working WaterMarker: prints standard or custom graphics in the background of any printed document

Hardware Connectivity



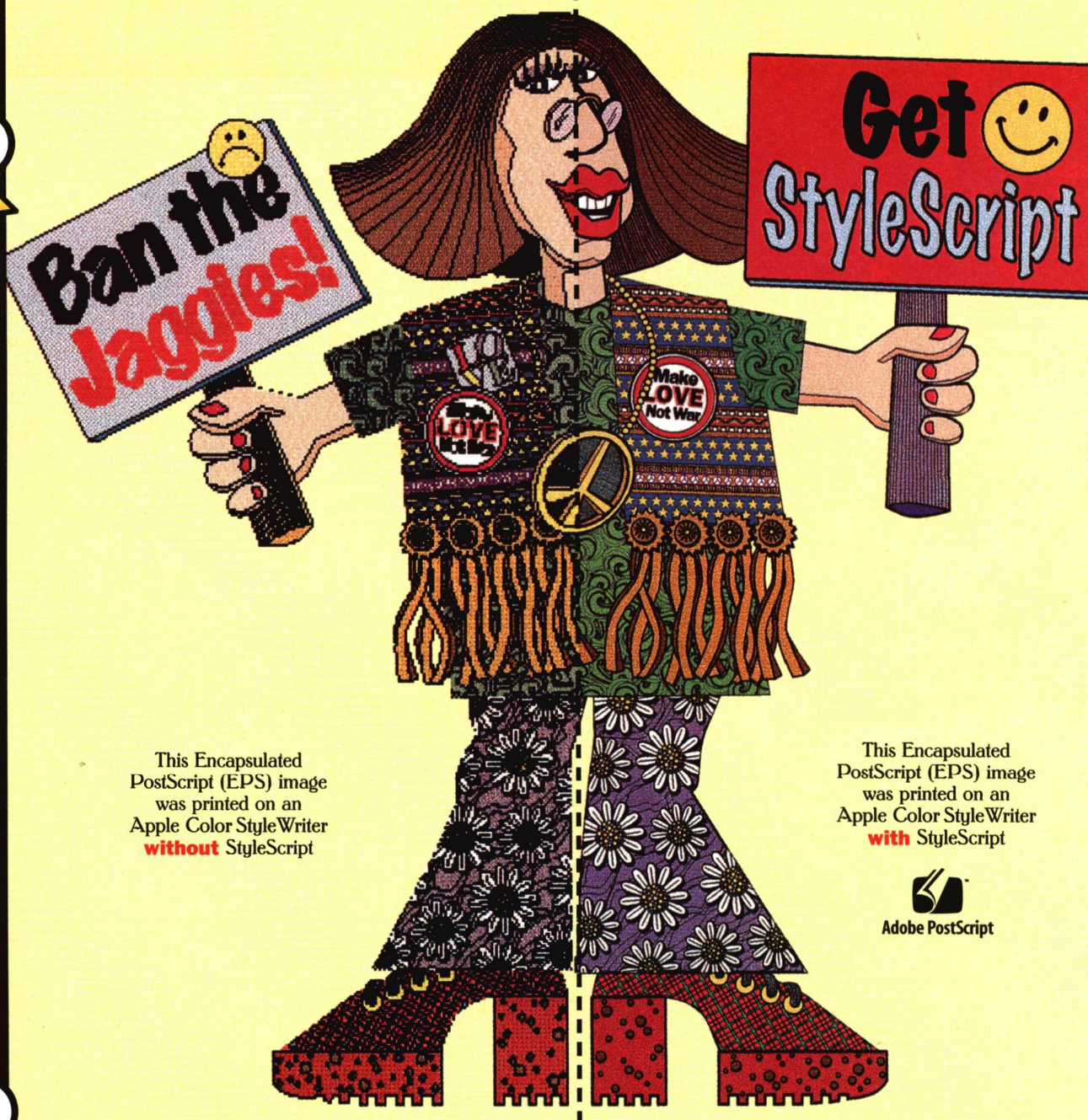
PowerNexus

PowerNexus is your LocalTalk to EtherTalk hardware bridge solution. The small, lightweight bridge will connect up to four of your LocalTalk networked computers, printers or other peripherals to your 10Base-T or Thin Coax EtherTalk network.

AutoSwitch

AutoSwitch is an inexpensive, automatic switchbox which includes all necessary cabling and adapters to easily share a printer between a PC and a Mac running a version of PowerPrint.

PostScript Solutions



This Encapsulated PostScript (EPS) image was printed on an Apple Color StyleWriter **without** StyleScript

This Encapsulated PostScript (EPS) image was printed on an Apple Color StyleWriter **with** StyleScript



Adobe PostScript

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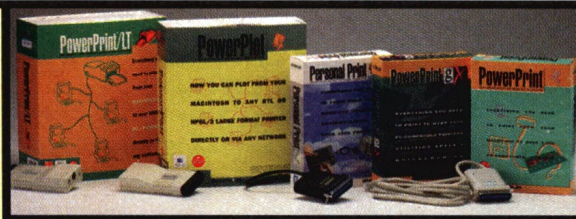
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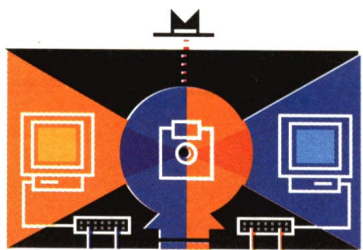
Personal Print: similar to PowerPrint, designed to print to the Magic Cap personal communicator

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**DATABASE ACCESS**

Middleware realizes system for client-server databases

By Cliff Lehman

Tools to help Macintosh clients tap into database servers are smoother than ever. But setting up the underlying systems that let users access the information — whether from a desktop platform or a mainframe database — remains a trouble spot for IS managers.

Contrary to the name, client-server systems have three basic components: the client; the server; and what comes between them, middleware. The front-end and back-end components (the client and the server) garner the most interest — one for its hard-core computing and the other because that's what users see. Yet middleware is how the information gets from one end to the other, and it's the area where managers spend most of their time.

Client-server architecture has never been as simple and straightforward as it sounds in theory. That's why IS people have had to work so hard. At one end you have a swamp of servers, with various makes and models of computers and operating systems where one or more database engines reside (including, Ingres, IBM DB/2, Informix, Oracle, Sybase and Microsoft SQLServer).

At the other end — unless you are one of those rare birds with only one platform on the desktop level — you may have Mac, OS/2, various shades of Microsoft Windows and numerous versions of Unix to contend with as clients.

Plugging in

Middleware vendors have tried to deal with this situation by providing drivers for as many databases and clients as possible — a moving target if ever there was one.

Open database connectivity (ODBC), a standard implemented by Microsoft Corp. and based on call-level interface, which was developed by the SQL Access Group, has eased the implementation of client-server systems for vendors and IS managers. If a software program is ODBC-compliant, managers can — in theory — plug any front-end application into any back end as long as those components and the middleware are all ODBC-compliant.

"We've been working with ODBC for just over a year now," said Rob Harris, a

"I'm not wedded to any one component as long as it supports ODBC. I hate being locked into specific platforms."

— Michael Droe, Hacienda La Puente Unified School District

senior specialist with DuPont Corp. in Wilmington, Del., who manages a mix of Windows, Mac, Unix and VAX clients with a server mix of MVS, VMS and Unix platforms. The site has about 45 servers and 1,500 clients, and about 500 of those are Mac clients.

"We were looking for a product that would help us avoid having to manage 10 products from 10 vendors, and that's where SequeLink [from Intersolv Inc. of Rockville, Md.] came in," Harris said. "It comes with ODBC compliance, so we only have to deal with one API."

Larger enterprises

Account executive Mike Dewid is more skeptical of ODBC in larger enterprises. Dewid's company, BEA Systems Inc. of Sunnyvale, Calif., makes BEA Access/DAL

(Data Access Language), a middleware product based on a proprietary language. "ODBC is an entry-level strategy," Dewid said. "It's a very inexpensive solution if you limit the number of components, but if you grow the number of seats and servers it's not as efficient. Above 200 seats it's cost-justified from maintenance and performance to embrace DAL's single-API strategy."

While BEA Systems' DAL offers ODBC as well as its proprietary APIs, Dewid maintained that DAL is probably a better choice for larger, more complex enterprises.

"If customers want to use the industry-standard ODBC, we support that," he said. "But in a situation where clients must connect to multiple databases, you must have multiple-database adapters, drivers and data transports. It becomes a management nightmare to keep all those components running together efficiently, and that's where DAL becomes very appealing: There is one component on the server and one on the client."

Michael Droe, director of networks and computer services for Hacienda La Puente Unified School District in City of Industry, Calif., recently changed his system from one in which DAL middleware connected

See Solutions, next page



John Strnad is manager of database administration at Walgreen in Deerfield, Ill. He said ODBC provides a choice to the 50-some users he has accessing a DB/2 database on an IBM 3090 mainframe with DAL middleware.

LARRY EVANS/BLACK STAR



GORDON STUDER

MACINTOUCH RIC FORD

Interruptions are source of glitches with serial ports

Macintosh serial ports have always been a little peculiar. Rather than creating distinct networking and serial communication subsystems, the Mac's original designers squeezed the two functions together. The end result was a fast, inexpensive, flexible serial architecture, but one that suffered from quirks and odd limitations.

Over the years, Apple engineers invented variations on the original theme, but the interaction between the printer port and the modem port remained. Changes to software drivers, serial controller hardware and even to the pin-outs of the ports added confusion. The GeoPort architecture introduced with the Mac Quadra AV series was touted as a fresh start. It supports much higher speeds, but GeoPorts still have their quirks, including an extra pin to power the GeoPort Telecom Adapter. Amazingly, LocalTalk and the GeoPort Telecom Adapter are incompatible on PCI-based Power Macs, something that is documented in the Apple Telecom 2.3.3 package.

Additional serial issues include poor performance with some PowerPC 603-based Macs and PowerBooks. Some

See MacInTouch, next page

SOLUTIONS

From previous page

clients to an Ingres database on a VMS server. Now he has deployed Visigenic ODBC DriverSet middleware from Visigenic Software Inc. of San Mateo, Calif., with Omnis 7 as the front end and Microsoft SQL Server running on Digital Equipment Corp.'s Alpha platform as the server. He has about 50 connected sites in the district.

"ODBC is critical," Droe said. "I'm not locked into any one platform at the front or back end."

Droe said he didn't have serious problems with DAL as a product. "The prob-

lem is DAL is controlled by one company. Now, I'm not wedded to any one component, as long as it supports ODBC. I hate being locked into specific platforms."

Choices for users

User choice is a big draw for ODBC because, along with simplifying management and development for managers, it makes it easier to plug the end users' client of choice into the system.

John Strnad, manager of database administration at Walgreen Co. in Deerfield, Ill., has about 50 Mac clients going through DAL middleware to access a DB/2 database on an IBM 3090 mainframe. He said he will be expanding to 100 users soon be-

cause he's adding district and regional managers around the country, and he said ODBC gives users a choice.

Strnad said he is happy with DAL and is inclined to keep it. However, he said he is also looking at implementing ODBC. "That one product that satisfies the needs of all clients is not out there," Strnad said, "so ODBC would ensure that our clients could use any front end."

DuPont's Harris, whose IS department has adopted a users' choice policy for database front-end tools, said, "Typically, end users don't know SequeLink is there." All they're aware of, he said, are front-end tools such as BrioQuery from Brio Technology Inc. of Mountain View, Calif.; Mi-

crosoft Excel; or GQL from Andyne Computing Ltd. of Kingston, Ontario. "And IS doesn't care what the tool is, as long as it supports ODBC," Harris said.

The Mac version of ODBC eased the development and management load for people such as Harris by letting them move from supporting several proprietary development systems to just a single standard.

"Just about every vendor puts out their proprietary system," Harris said, "but it's easier to use products with ODBC because they support the same API."

Front-end vendors, such as Andyne, also contribute to easy cross-platform development and portability.

Frank Pellegrino, director of information services at the Public Broadcasting Service in Alexandria, Va., oversees about 200 Macs and 100 Windows machines. His client-server system has an Ingres data server with SequeLink as middleware and a variety of front-end tools for his Mac and Windows clients.

One of those tools is Andyne's GQL. "GQL moves easily from Mac to PC," Pellegrino said. "They are binary-compatible so nothing needs to change, really."

Pellegrino said he only had to change the communications settings from SQL-Net to IngresNet. "It takes about 10 seconds; Andyne made our lives fairly easy in that respect," he said.

Client-server data systems have often been thought of as a desktop architecture sprung up in opposition to mainframes. However, despite the desktop revolution, mainframes still count as more than an oil slick on the great silicon sea of corporate computing.

In the back of many desktop partisans' minds, the real test of a system's virility has always been getting in and out of mainframe databases, even though they are no more difficult than the many other platforms that are dishing out data in similar environments. □

IS teams use data warehousing to join databases

Part of the complexity of client-server systems can be traced to ambitious IS departments that try to give their users access to more company databases by compiling separate databases in a data warehouse. Users can then view data from disparate databases as a single set of data.

Mary Wenzel, a decision support analyst in Information Technology Systems and Services at Stanford (Calif.) University helped support users accessing a data warehouse by building space and financial information, sponsored research, and student data in a Sybase data server on a Unix platform.

"Our strategy so far has been having multiple [front-

end] tools for multiple kinds of clients," Wenzel said.

"For example, we just added space data to the warehouse, so we want a client who knows the space data to use BrioQuery [from Brio Technology] for a while to understand what common joins

users are going to want," she said. "After that, we can set up standard joined tables for users of BusinessObjects" from Business Objects Inc. of Cupertino, Calif.

"BrioQuery works for people who really know the data and are not confused by tables from different sources," Wenzel said. "It's a tool we use ourselves to do something like set up an eight-table join."

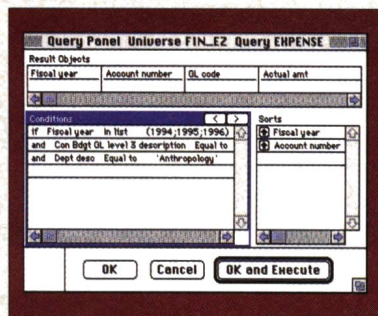
Having one tool for development and one for clients is a good thing, Wenzel said.

"The work we did integrating the data was good, but nonetheless still fairly complicated," she said.

"We tried to add some flexibility with some nice roll-up tables, but we found that clients were intimidated by tables and joins." So, she said, her division set up BusinessObjects (to give clients a smaller view of the warehouse) and arranged joins for them.

There is a maintenance load to perform this kind of setup, she said, but when a simple universe is built correctly it is easy to train users and easy to support.

Wenzel said she and her users are pleased, even as they look forward to improvements in client-server systems. "People love it when they can get their data back without having to wait overnight," she said. — By Cliff Lehman



A financial query in BusinessObjects shows a typical expense breakdown.

MACINTOUCH

From previous page

MIDI operations have been an issue with PowerBooks.

These problems exist at the lowest levels of the Macintosh platform, where programs compete for resources through "interrupts" of various priorities. The full details are highly technical and virtually undocumented, at least outside Apple. The essential problem, though, is that the modem port may not get prompt enough attention from its partner subsystems when the Mac is too busy to process all the data coming in. The Mac's small serial buffers provide no spare holding area, so data gets lost. The issue does not affect NuBus or PCI cards managing serial ports through their own dedicated processors and buffer memory.

Distinctive differences

The hardest part of managing these serial-port issues is figuring out the variations among Mac models. The Mac IIx, for ex-

ample, is notorious for its architectural departures from the Mac mainstream. These special features included a serial controller that isolated the hardware from applications that were accustomed to controlling it directly. An Apple control panel, Serial Switch, provides a compatibility mode for the IIx hardware and for similar serial ports in Quadra 900 and 950 models. (This control panel supersedes the earlier Macintosh IIx Serial Switch control panel.)

Mac models with GeoPort hardware had numerous problems stemming from Apple's serial driver, but the latest system software releases provide the completely different SerialDMA driver (see 12.04.95, Page 52).

Another distinction among Macs, although it may not affect many people, concerns GPi (General-Purpose Input) support in the serial ports. Many models lack GPi hardware, including Classic, LC, IIsi, PowerBook, Performa 63x and other se-

ries, according to an article in Apple's Tech Info Library entitled "GPi: Some Macintosh Models Do Not Support It." GPi could be used for external clocking of the port with rarely used synchronous modems or be used for a certain type of hardware handshaking (Data Carrier De-

A rule of fast, serial communication is to avoid simultaneous activities.

tect). Hardware handshaking with typical modems on the Mac, however, uses Data Terminal Ready and Clear to Send pins.

Rules of the road

The basic rule for high-performance serial communications on the Mac is to avoid simultaneous networking, especially over LocalTalk, and other taxing operations, such as inserting floppy disks or loading the processor down with work. Disabling virtual memory and RAM Doubler may also help.

The Power Manager in PowerBooks can cause problems, too, taking over control long enough so that data overruns the

serial buffers during heavy transfers to the computer. This has been an issue for musicians attempting to "dump" blocks of data from synthesizers to the Mac over MIDI. Disabling the PowerBook's energy-saving rest mode is the first step; others are updating the system software and MIDI software. The Power Manager reportedly hogs less time in recent PowerBooks than in the Ixx series.

Recently, customers have complained of terrible serial performance in Performa 63xx and related models. The problem is not clearly isolated, but disabling RAM Doubler often helps, and disabling some Global Village extensions may help, too. As with PowerBooks and GeoPort Express Modems, the safest course is to avoid any kind of heavy, simultaneous processor and networking loads when using the modem port. □

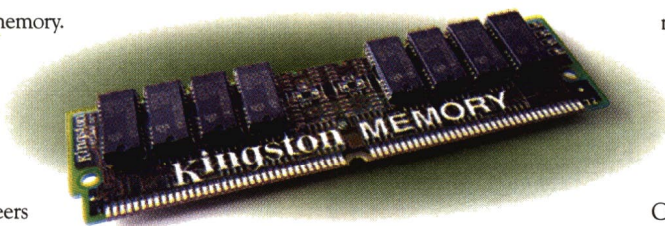
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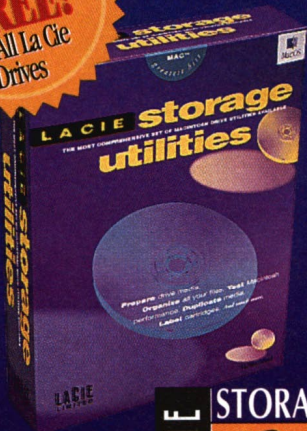
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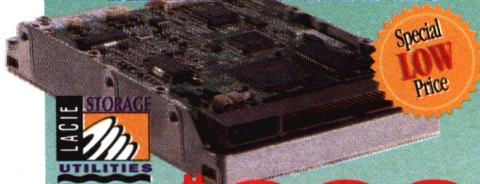
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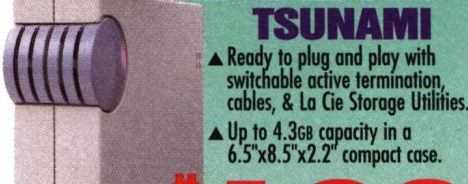
Quantum Atlas 4.3 GB

3.5" Drives

1080MB Quantum Fireball*	3 yr. warr.	\$234
1280MB Quantum Fireball	3 yr. warr.	\$257
2160MB Ultrastar ES	5 yr. warr.	\$399
2.1GB Quantum Fireball TM	4,500 rpm 3 yr. warr.	\$399
3.2GB Quantum Fireball TM	4,500 rpm 3 yr. warr.	\$499
4.3GB Quantum Atlas	7,200 rpm 5 yr. warr.	\$838

Brackets available for \$10 with internal hard drive purchase.
* While supplies last.

EXTERNAL HARD DRIVES



\$489

Ultrastar ES 2160 MB

Tsunami External Drives

1080MB Quantum Fireball*	3 yr. warr.	\$299
1280MB Quantum Fireball	3 yr. warr.	\$327
2160MB Ultrastar ES	5 yr. warr.	\$489
2.1GB Quantum Fireball TM	4,500 rpm 3 yr. warr.	\$489
3.2GB Quantum Fireball TM	4,500 rpm 3 yr. warr.	\$589
4.3GB Quantum Atlas	7,200 rpm 5 yr. warr.	\$919

* While supplies last.

POWER WIDE HARD DRIVES

▲ Utilize Wide-SCSI technology for high-speed,
high capacity file transfer

FAST: 1 drives + 1 card	
WRITE	7.0 MB/Sec
READ	7.7 MB/Sec
FASTER: 2 drives, 2 cards + RAID	
WRITE*	13.0 MB/Sec
READ*	14.3 MB/Sec
FASTEST: 3 drives, 3 cards + RAID	
WRITE*	32.8 MB/Sec
READ*	27.0 MB/Sec

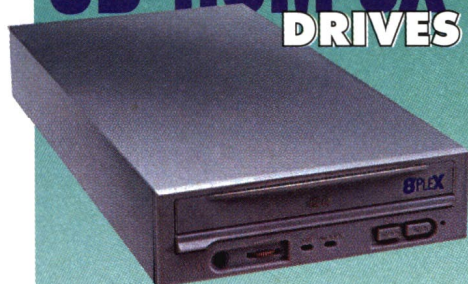
Power Wide External Drives

2.0GB Quantum Atlas Wide	NEW!	\$1099
+ Wide PCI Adaptec 2940 Board		
2.0GB Quantum Atlas Wide	NEW!	\$1199
+ RAID + Wide PCI Adaptec 2940 Board		
4.0GB Quantum Atlas Wide	NEW!	\$1299
+ Wide PCI Adaptec 2940 Board		
4.0GB Quantum Atlas Wide	NEW!	\$1399
+ RAID + Wide PCI Adaptec 2940 Board		

* RAID Level 0 (Striped)

For PCI Macs only

CD-ROM 8X DRIVES



- ▲ Fastest access speed available.
- ▲ Transfer rates up to 1200kb/sec.
- ▲ Smooth audio and video playback.

\$249

8X CD-Rom

8X CD-Rom External **\$249**

CD-R DRIVES



- ▲ Low cost media for backup.
- ▲ CD-Rs ship with Gear Multimedia software.
- ▲ Create your own CD with fast write capability.

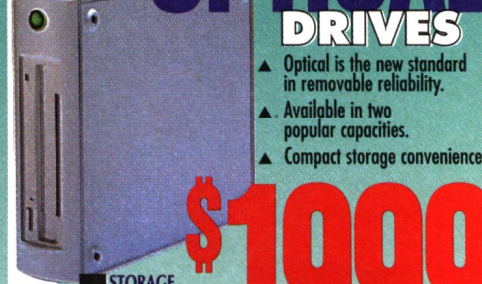
\$1299

4X CD Recorder

CD-Recorders

4X CD Recorder with Gear MultiMedia	\$1299
650 CD-R Disk 74 Minutes 10 Disk Pack	\$89

OPTICAL DRIVES



- ▲ Optical is the new standard in removable reliability.
- ▲ Available in two popular capacities.
- ▲ Compact storage convenience.

\$1999

2.6GB Optical

230MB PowerBook Internal	1 yr. warr.	\$399
230MB Optical Cartridge		\$25
640MB External		\$599
640MB Optical Cartridge		\$49
2.6GB External	1 yr. warr.	\$1799
2.6GB Optical Cartridge		\$99

DAT AND DLT DRIVES



- ▲ The ideal medium for data backup.
- ▲ The cheapest backup solution per megabyte.

\$899

8.0GB DAT DDS-2

DAT Drives Includes Retrospect

8.0GB DAT DDS-2 External	\$899
8.0GB TURBO DAT DDS-2 External	\$1089
30.0GB Quantum DLT External	\$2999
40.0GB Quantum DLT External	\$4999

PORTABLE JOULE DRIVES



- ▲ Docking provides new security and backup solutions.
- ▲ Share hard disk-sized files with diskette convenience.
- ▲ Unplug and go for convenient data transport.

Joule 3.5" Drives with Dock

1280MB Quantum Fireball	3 yr. warr.	\$399
2.1GB	3 yr. warr.	\$659
3.2GB	3 yr. warr.	\$669

TOWER JOULE DRIVES



3.5" Drives with Mount

For use in Tower with a Joule Base.

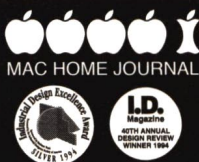
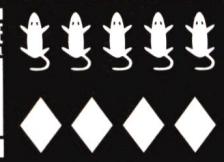
1280MB Quantum Fireball	3 yr. warr.	\$469
2.1GB	3 yr. warr.	\$689
3.2GB	3 yr. warr.	\$789
4.3GB Quantum Atlas	7200 rpm 5 yr. warr.	\$1099

Joule Bases - Supports Stacks Up To 6 Drives High

2160MB Ultrastar ES HD	3 yr. warr.	\$699
------------------------	-------------	--------------

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- Color previews in seconds.
- Scans in under a minute.
- The industry's leading scanning software.

"ScanPrep is an essential application if you own a scanner... the sort of program that has to be seen to be believed."

Ben Long - MacWeek

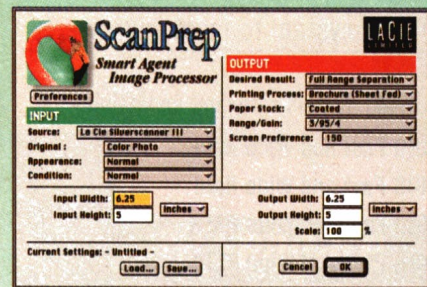
Highest Possible Rating



"No matter what acquired plug-in you get if you use Photoshop, you'll also want to buy a copy of ScanPrep."

- MacUser

Highest Possible Rating



FREE with all La Cie scanners, ScanPrep automates Photoshop's* image processing tools, individually preparing each image for printing right before your eyes. Simply describe the project to ScanPrep and scan the base image. ScanPrep yields professional prepress results, quickly and easily.

ScanPrep provides automatic adjustment of picture contrast and color saturation. Even when the original is lacking in contrast or saturation, it corrects the problem without human intervention.

Silverscanner PRO

24 bit color, 300 x 600 dpi interpolated to 1200 dpi.

- ▲ Silverscan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$499



Silverscanner PRO with Photoshop LE

24 bit color, 300 x 600 dpi interpolated to 1200 dpi.

- ▲ Photoshop LE
- ▲ ScanPrep
- ▲ Silverscan
- ▲ Omnipage Lite OCR

\$599

Silverscanner DTP

30 bit color, 400 x 800 dpi interpolated to 3200 dpi.

- ▲ Silverscan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$799



Silverscanner DTP with Photoshop LE

30 bit color, 400 x 800 dpi interpolated to 3200 dpi.

- ▲ Photoshop LE
- ▲ ScanPrep
- ▲ Silverscan
- ▲ Omnipage Lite OCR

\$889

Silverscanner III

30 bit color, 600 x 1200 dpi interpolated up to 4800 dpi.

- ▲ Silverscan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$1499



Silverscanner III with Photoshop Full

30 bit color, 600 x 1200 dpi interpolated up to 4800 dpi.

- ▲ Photoshop (Full Edition)
- ▲ ScanPrep
- ▲ Silverscan
- ▲ Omnipage Lite OCR

\$1659

Sheet Feeder Adapter (DTP and III)

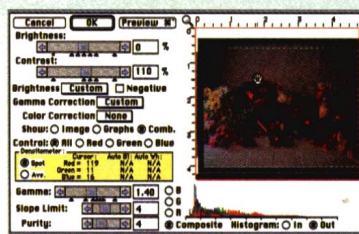
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Transparency Adapter (DTP and III)

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No matter which software bundle you choose, you'll also receive Silverscans' award-winning scanning software giving you professional scans.

* Full version only.



REMOVABLE DRIVES

- ▲ 1 GB of data on sturdy and compact 3.5-inch disks.
- ▲ Exclusive La Cie metal case includes power supply.
- ▲ Includes 3 cartridges!



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Includes ONE FREE cartridge! (\$18 Value)

SYQUEST EZFLYER 230MB **\$299**
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IOMEGA JAZ 1GB External **\$649**
Includes THREE FREE cartridges! (\$357 Value)

CARTRIDGES

	Qty. 1	Qty. 10
Jaz 1GB	\$119 ea.	\$99 ea.
Syquest SQ400 44MB	\$38 ea.	\$37 ea.
Syquest SQ800 88MB	\$42 ea.	\$41 ea.
Syquest SQ2000 200MB	\$62 ea.	\$61 ea.
Syquest SQ105 105MB	\$53 ea.	\$52 ea.
Syquest EZ135 135MB	\$18 ea.	\$17 ea.
Syquest EZFlyer 230MB	\$30 ea.	\$29 ea.
Syquest SQ3270 270MB	\$48 ea.	\$47 ea.
Optical 128MB	\$16 ea.	\$15 ea.
Optical 230MB	\$21 ea.	\$20 ea.
Optical 1.3GB	\$59 ea.	\$58 ea.
Optical 2.6GB	\$85 ea.	\$84 ea.
CD-R 74 650MB		\$8 ea.
DAT 90m	\$9 ea.	\$8 ea.
DAT 120m	\$24 ea.	\$25 ea.
DAT Cleaning Kit	\$9 ea.	\$8 ea.
DLT 30 30GB	\$40 ea.	\$39 ea.
DLT 40 40GB	\$98 ea.	\$97 ea.

CLEARANCE

90 day warranties. Some drives are refurbished. No rain checks. Quantity is limited to stock on hand. First come, first served.

HARD DRIVES	PRICE
80MB 2.5" Quantum Internal	\$79
270MB 3.5" Quantum Internal	\$89
540MB Quantum External	\$149
1080MB Quantum Internal	\$199
1400MB Quantum Internal	\$229
2.1GB Quantum Internal	\$369
2.1GB Seagate Internal	\$369
4.3GB Quantum Internal	\$799
REMOVABLE DRIVES	PRICE
270MB SyQuest External	\$279

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INTERNAL HARD DRIVE

\$399

2160 MB
Ultrastar ES

EXTERNAL HARD DRIVE

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Quantum Fireball

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"Direct Connections provided excellent technical support." **MacWorld July '95**
 "Direct Connections' array offered the best performance per dollar of the drives tested." **Digital Video Oct. '94**
 "Your next option is to locate...highly visible digital video suppliers like Direct Connections." **NEWMEDIA June '95**
 "This array is the one to beat." **Ken Grey** Writer for WIRED, Computer User, MovieMaker, Computer Video, and Digital Video Magazine.
 "Stick with a vendor such as Direct Connections that understands how to prepare a RAID for desktop video." **MacWorld April '95**

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Differentials available

Only from DC

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- In-house engineers
- Factory direct products
- Award winning service
- \$5 million in inventory
- 9 Years in business



Seagate Hawk 2XL

- 1.2GB
- Ultra SCSI 3
- PRML
- Low profile
- Embedded Servo
- 3 yr warranty

\$.399

5 YEAR WARRANTY

BRAND/MODEL	CAPACITY	ACCESS	RPM	INTERNAL	EXTERNAL
HITACHI 2.5" IDE***	810MB	14MS	5400	\$ 339	
HITACHI 2.5" IDE***	1.0GIG	14MS	5400	\$ 425	
Conner CFP1080	1.2GIG LP	11MS	5400	\$ 295	\$ 365
Seagate ST51080N ***	1.2GIG LP	12.5MS	5400	\$ 290	\$ 360
Seagate Hawk 2XL***	1.2GIG LP	9MS	5400	\$ 399	\$ 469
Seagate 32105N	2.1GIG LP	9MS	5400	\$ 550	\$ 620
Conner CFP2107S	2.1GIG LP	8MS	7200	\$ 759	\$ 829
Seagate 32155N	2.1GIG Ultra SCSI	9MS	5400	\$ 599	\$ 669
Quantum Capella	2.2GIG MR	8.6MS	5400	\$ 525	\$ 595
Quantum Atlas	2.1GIG LP	8MS	7200	\$ 695	\$ 765
Seagate Barracuda 2	2.5GIG LP	8MS	7200	\$ 715	\$ 785
Seagate Barracuda 2W	2.5GIG LP	8MS	7200	\$ 775	\$ 855
Conner CFP2107W	2.5GIG LP	8MS	7200	\$ 795	\$ 895
Fujitsu M2934S	4.2GIG MR	8MS	7200	\$ 1075	\$ 1145
Fujitsu M2934Wide	4.2GIG MR	8MS	7200	\$ 975	\$ 1045
Seagate Barracuda 4	4.1GIG	8MS	7200	\$ 1135	\$ 1205
Seagate Barracuda 4W	4.1GIG	8MS	7200	\$ 1255	\$ 1325
Seagate Hawk4	4.3GIG	9MS	5400	\$ 899	\$ 999
Conner CFP4207S	4.2GIG	9MS	7200	\$ 999	\$ 1069
Conner CFP4207wide	4.2GIG	9MS	7200	\$ 1099	\$ 1199
Quantum Atlas	4.3GIG	8.6MS	7200	\$ 999	\$ 1069
Seagate Elite 9	9.0GIG	11MS	5400	\$ 2095	\$ 2195
Seagate Elite 9W	9.0GIG	11MS	5400	\$ 2295	\$ 2395

CD RECORDERS/PLAYERS

Ricoh 2 speed recorder / 4 speed player 1420

\$799

We also have the
2 x4 with 2MB of
Cache **\$999**



Includes Free software

Yamaha 4 speed Recorder / 4 Player	External	\$ 1299
Yamaha 2 speed Recorder / 4 speed Player	External	\$ 849
Yamaha 2x4 Recorder with built in hard drive	External	\$ 1329
Philips 2x4 Recorder	External	\$ 825

Pioneer 4 speed 18-Disc CD-ROM Changer	External	\$ 1499
Toshiba 3701 6 speed CD Player	External	\$ 370
Nakimichi 8x 4-Disc CD-ROM Changer	External	\$ 745
Panasonic 4x CD/650MB Optical	External	\$ 499

150 Slot Jukebox with 4 players, all platforms	External	\$ 15900
150 Slot Jukebox w/ CD Recording, all platforms	External	\$ 17500
CD Duplicator. Just hit the button, walk away.	External	\$ 5999
CD Network Archiving, Libraries, and Recording. All Platforms.		

"Stick with a vendor such as Direct Connections that understands how to prepare a RAID for desktop video." **MacWorld April '95**



Atto Silicon Express IV	\$ 755
Atto Express PCI MC	\$ 695
Atto Express PCI SC	\$ 315
Adaptec AHA-2940UW	\$ 295
Adaptec AHA-3940UW	\$ 355
SCSI Expander	\$ 999

MEDIA 100

TRIGA 2000

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RAID SYSTEMS

FAST DESKTOP OR SERVER

- 28mb/sec sustained sequential Writes.
- Tested with MacBench on PowerMac 9500.

126IG with 2 PCI accelerator cards **\$ 7799**

From Hardware RAIDS to Software RAIDS, we'll show you how to configure the best system to meet your needs.

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• 28 GIG Fast and Wide RAID	\$ 9499
• 40 GIG Fast and Wide RAID	\$ 15599

OPTICAL DRIVES

2.6GIG Sony Optical for \$1959 external including all cabling, and software!!

CAPACITY	MODEL	EXTERNAL
230MB	Fujitsu	\$ 499
2.6GB	Hitachi	\$ 1895
2.6GB	Sony 1MB cache	\$ 1959
2.6GB	Sony 4MB cache	\$ 2159
26GB	Sony Jukebox	\$ 4695
52GB	Sony Jukebox	\$ 6295



\$1959

1 YEAR WARRANTY

TAPE BACK-UP

We are the tape-backup Experts

2 YEAR WARRANTY

With 2.5MB/sec sustained transfer, the DLT2000XT is perfect for digital video or pre-press with large data files.

All systems include cabling, and Retrospect software.

CAPACITY	MODEL	MEDIA	INTERNAL	EXTERNAL
-4GIG	Tandberg Panther	1/4"	\$ 469	\$ 539
-8GIG	DC8000	4MM	\$ 839	\$ 899
-8GIG	Sony 7000 DDS-2*	4MM	\$ 929	\$ 999
-14GIG	Exabyte 8505XL	8MM	\$ 2065	\$ 2125
-14GIG	Exabyte 8700	8MM		\$ 1575
-30GIG	DLT2000XT	1/2"		\$ 3299
-40GIG	DLT4000	1/2"		\$ 4999
-140GIG	Exabyte-10h Library	8MM		\$ 4999
-200GIG	Spectra Logic 4000	4MM		\$ 8599
-200GIG	DLT4500 Loader	1/2"		\$ 8999



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30GIG

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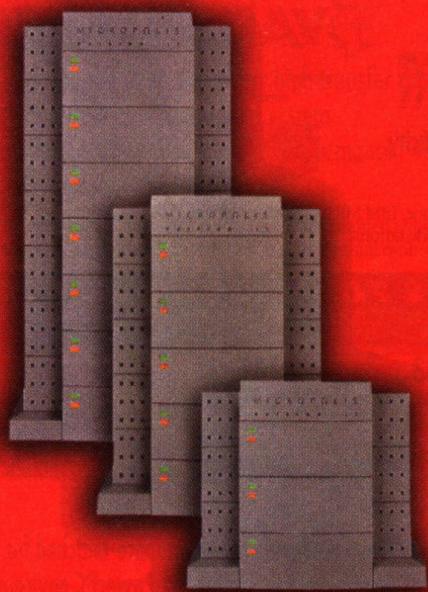
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*Internal Configuration
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THE STACKABLE, REMOVABLE DRIVE SUBSYSTEM

Model #	Capacity
MDLT2100/AV	2.1 GB
MDLT4300/AV	4.3GB
MDLS9100/AV	9.1GB

NOW AVAILABLE IN FAST/WIDE CONFIGURATION.
ASK ABOUT THE MICRODISK RAID 5 ARRAY!

CALL FOR LATEST PRICING AND CONFIGURATION.

HARD DRIVES

ALL DRIVES ARE PREFORMATTED, TESTED AND PACKAGED
WITH SCSI MANAGER 4.3 COMPATIBLE DRIVERS. EXTERNAL
DRIVES INCLUDE CHOICE OF 25-50 OR 50-50 PIN CABLE.

Capacity	Model No.	Mechanism	Seek	Warranty	Internal	PHASER-I
840 MB	DT-840	Quantum	11.0 ms	3 yrs	\$199	\$275
1.05 GB	DT-51080	Seagate NEW LOW PRICE!	10.0 ms	3 yrs	\$269	\$344
1.0 GB	DT-1080FB	Quantum	11ms	3 yrs	\$269	\$344
1.05 GB	DT-31230	Seagate NEW LOW PRICE!	9.0 ms	5 yrs	\$380	\$455
2.0 GB	DT-32107	Conner NEW PRODUCT!	8.0 ms	5 yrs	\$625	\$699
2.0 GB	DT-4221	Micropolis	8.0 ms	5 yrs	\$599	\$675
2.1 GB	DT-32550	Seagate Barracuda II NEW LOW PRICE!	8.0 ms	5 yrs	\$725	\$800
4.3 GB	DT-14207	Conner NEW PRODUCT!	8.0 ms	5 yrs	\$950	\$1,025
4.3 GB	DT-3243	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	\$975	\$1,050
4.3 GB	DT-15230	Seagate Hawk 4 NEW PRODUCT!	9.0 ms	5 yrs	\$899	\$975
4.3 GB	DT-15150	Seagate Barracuda NEW LOW PRICE!	8.0 ms	5 yrs	\$1,075	\$1,175
9.0 GB	DT-1991	Micropolis NEW LOW PRICE!	12 ms	5 yrs	\$1,950	\$2,050
9.0 GB	DT-410800	Seagate Elite 9 NEW LOW PRICE!	11 ms	5 yrs	\$1,925	\$2,025

AUDIO/VIDEO TUNED DRIVES

DIRECTTECH SYSTEMS IS AN AUTHORIZED
A/V PARTNER WITH SEAGATE AND MICROPOLIS.

Capacity	Model No.	Mechanism	Seek	Warranty	Internal	PHASER-I
2.0 GB	DT-4221AV	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	\$650	\$725
2.1 GB	DT-32550AV	Seagate Barracuda	8.0 ms	5 yrs	\$725	\$800
4.3 GB	DT-14207AV	Conner NEW PRODUCT!	8.0 ms	5 yrs	\$950	\$1,025
4.3 GB	DT-3243AV	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	\$1,050	\$1,125
4.3 GB	DT-15150AV	Seagate Barracuda	8.0 ms	5 yrs	\$1,125	\$1,225
9.0 GB	DT-1991AV	Micropolis NEW LOW PRICE!	12 ms	5 yrs	\$2,050	\$2,150
9.0 GB	DT-410800AV	Seagate Elite 9 NEW LOW PRICE!	11 ms	5 yrs	\$1,975	\$2,075

FAST/WIDE SCSI DRIVES

MOST EFFECTIVE WHEN COMBINED WITH A FAST/WIDE
ATTO BOARD. CALL FOR SPECIAL CONFIGURATIONS!

Capacity	Model No.	Mechanism	Seek	Warranty	Internal	PHASER-I
2.1 GB	DT-32550W	Seagate Barracuda 2LP Wide		5 yrs	\$799	\$899
2.1 GB	DT-4221W	Micropolis 4221Wide		5 yrs	\$699	\$799
4.3 GB	DT-15150W	Seagate Barracuda 4 Wide		5 yrs	\$1,175	\$1,275
4.3 GB	DT-3243W	Micropolis 3243Wide		5 yrs	\$1,050	\$1,150
9.0 GB	DT-1991W	Micropolis 1991Wide		5 yrs	\$2,085	\$CALL
9.0 GB	DT-1991AVW	Micropolis 1991AVWide		5 yrs	\$2,185	\$CALL
9.0 GB	DT-410800W	Seagate Elite 9 Wide		5 yrs	\$CALL	\$CALL

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MEDIA 100 * RADIUS * DIGITAL VIDEO * TARGA 2000
ARRAYS INCLUDE - ATTO CARD, REMUS & 2 FAST/WIDE DRIVES

Capacity	Model No.	Mechanism	Seek	Warranty	EXTERNAL
4.0 GB	DT-32550W-2	Seagate - Fast/Wide Barracuda 2LP (2)	4.0 ms	5 yrs	\$CALL
8.0 GB	DT-3243WAW	Micropolis - Fast/Wide 3243AV (2)	4.0 ms	5 yrs	\$CALL
18.0 GB	DT-1991WAW	Micropolis - Fast/Wide 1991AV (2)	4.0 ms	5 yrs	\$CALL

CALL FOR MORE INFORMATION ON DIRECTTECH DISK ARRAYS!

ATTO Silicon Express IV	Nubus Fast/Wide Accelerator	\$CALL
ATTO Express PCI	Dual Channel - PCI -Fast/Wide	\$CALL
ATTO Express PCI	Single Channel - PCI-Fast/Wide	\$CALL

SyQUEST

INCLUDES ANUBIS
FORMATTING SOFTWARE
AND ONE CARTRIDGE

Capacity	Model No.	Internal	PHASER-I
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200 MB	SQ5200	\$420	\$480
270 MB	SQ3270	\$420	\$470

CD ROM

RECORDABLE

JVC Personal Archiver (2X)	\$1,165
JVC Personal Archiver (4X)	\$1,999
Yamaha CD Recorder (4X)	\$1,699

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4-8 GB	Sony-5000	DDS-2	\$999
4-8 GB	HP-1533A	DDS-2	\$1,250
5-10 GB	Exabyte-8505	8mm	\$2,150
15-30 GB	DLT-2000XT	DLT	\$4,399

OPTICAL

INCLUDES ANUBIS
FORMATTING SOFTWARE
AND ONE CARTRIDGE

Capacity	Model No.	Seek	PHASER-I
230 mb	Fujitsu	30 ms	\$675
1.3 GB	HP-C1716	23 ms	\$1,999
1.3 GB	Maxoptix T-III	18 ms	\$2,199

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Seagate

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PACKARD**

Quantum

SyQuest

JVC

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SAT 10 A.M. - 2 P.M.

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Syquest 105	\$54
Syquest 200	\$76
Syquest 270	\$60
Optical 128 MB	\$22
Optical 230 MB	\$30
Optical 1.0 GB	\$100
Optical 1.3 GB	\$90

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- ✓ High areal density and PRML read channel
- ✓ Fast ATA-2 version available for just **\$229.95**

Finally there's a hard drive that combines the reliability of a 5400 rpm mechanism with high performance. The APS Q 1280 is capable of 4.39MB per second sustained writes and 5.50MB per second sustained reads, making it great for any demanding application. It is backed by a 3-year warranty and supports a 500,000 hour MTBF.

DESKTOP DRIVE BARGAIN

APS Q 840

- ✓ Great value
- ✓ Low power requirements and low noise
- ✓ 810MB formatted capacity
- ✓ 3-year warranty

GREAT PRICE \$189⁹⁵



Quantum

When you've installed multiple applications and generated enough files that your Mac's original hard drive is no longer adequate for your needs, it's time to upgrade to the APS Q 840.

7200 RPM PERFORMANCE, 5400 RPM PRICE

APS MS 2000

- ✓ 7.31MB/sec. sust. write, 4.54MB/sec. sust. read
- ✓ 5400 rpm mechanism
- ✓ 5-year warranty

\$469⁹⁵



Internal configuration
MICROPOLIS



This incredible drive has the performance you would expect from a 7200 rpm mechanism but with a 5400 rpm drive's price - and reliability! The APS MS 2000 formats to 2047MB, delivers sustained reads at up to 4.54MB/sec. and sustained writes at up to 7.31MB/sec, has an average access time of 20 ms and average seek of 9.6 ms.

NEW LIFE FOR SCSI POWERBOOKS!

APS I 1.2

- ✓ SCSI-2 interface
- ✓ Great for large applications
- ✓ Uses IBM's No-ID™ technology to increase capacity by reducing overhead

GREAT PRICE \$699⁹⁵

Internal configuration



The APS I 1.2 is a SCSI drive that's ideal for demanding spreadsheet, communication and graphics applications. At 4900 rpm, the drive gives you the performance you need from your PowerBook. Ideal upgrade for Blackbird (500) & Duo (200) series PowerBooks.

STEAL 2GB FOR JUST

APS I 2160

- ✓ 8 ms average seek
- ✓ Over 2060MB formatted capacity
- ✓ The best value for performance and capacity
- ✓ 5-year warranty

\$449⁹⁵



Internal configuration



What a deal - 2063MB for under \$500! Great performance, IBM MR head technology and 800,000 hour MTBF make this the drive to buy for all those needy workstations.

APS SCSI DRIVES				
Model	Capacity/Features	Awards	Internal	SR2000
APS Q 840	811MB Quantum 840 Trailblazer 4500 rpm	MacWorld ★★★★	\$189 ⁹⁵	\$259 ⁹⁵
APS Q 1280	1222MB Quantum Fireball II 1280 5400 rpm	MacWorld ★★★★	249 ⁹⁵	349 ⁹⁵
APS I 2160	2063MB IBM Ultrastar ES 5400 rpm	MacWorld ★★★★	449 ⁹⁵	549 ⁹⁵
APS MS 2000	2047MB Micropolis 4421 5400 rpm	MacWorld ★★★★	469 ⁹⁵	569 ⁹⁵
APS MS 2000AV	2047MB Micropolis 4421AV 5400 rpm	MacWorld ★★★★	569 ⁹⁵	669 ⁹⁵

APS IDE DRIVES FOR MACINTOSH		
Model	Capacity/Features	Internal
APS Q 1280A	1222MB Quantum Fireball II 1280 5400 rpm (Fast ATA-2)	\$229 ⁹⁵

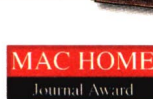
APS POWERBOOK DRIVES		
Model	Capacity/Features	Internal
APS Q 1.08	1037MB Quantum Europa 3800 rpm, IDE - Fast ATA-2	\$399 ⁹⁵
APS I 1.2	1200MB IBM Travelstar DPRS-21215 4900 rpm, SCSI-2	699 ⁹⁵

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*Available only in full-height case

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NOW JUST

\$899⁹⁵

Internal configuration
Quantum



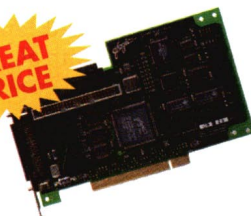
MacUser 7.0
LABS
★★★★½

APS Q 4.0

- ✓ Embedded servo eliminates thermal recalibration
- ✓ 7200 rpm mechanism delivers high transfer rates
- ✓ 2MB cache buffer boosts performance
- ✓ 5-year warranty

Using an embedded servo as well as a high-performance 7200 rpm mechanism, the APS Q 4.0 is equally at home with AV and non-AV applications.

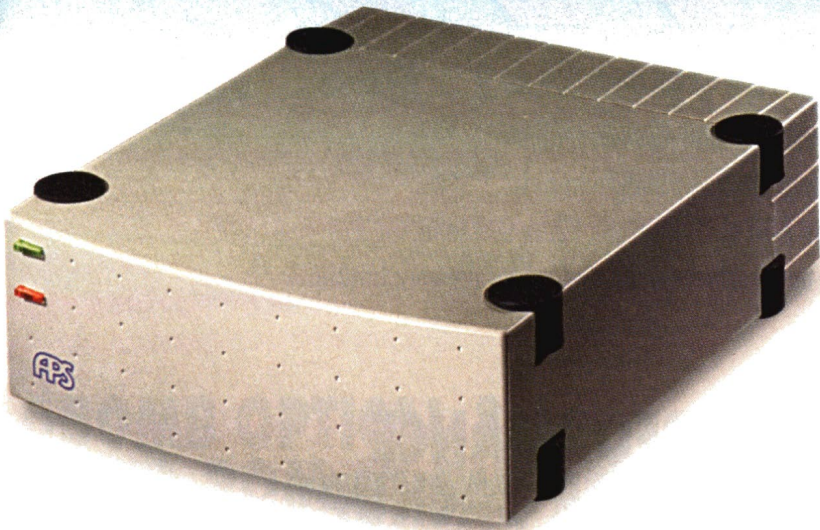
GREAT PRICE



FAST/WIDE ADAPTER CARDS

QLogic Fast!SCSI Mac PCI-W HD 68-Pin \$379⁹⁵
Adapter for Fast/Wide drives

SiliconExpress IV HD 68-Pin 849⁹⁵
For NuBus Quadras & Power Macs only. Fast/Wide adapter card.



4GB AT AN AMAZING PRICE!

APS MS 4.0

- ✓ Great drive for disk-intensive applications
- ✓ 7200 rpm mechanism
- ✓ Our fastest SCSI-2 4GB drive
- ✓ 5-year warranty

JUST \$899⁹⁵

MacUser 7.0
LABS
★★★★



Internal configuration
MICROPOLIS



Supplying the speed and capacity needed with disk-intensive applications like 3D rendering and image editing, the APS MS 4.0 is a terrific choice for heavy-duty storage duties on your Power Mac or Quadra. This 7200 rpm performance champ formats to over 4GB and boasts sustained reads and writes of 4.1MB/sec. and 5.1MB/sec., respectively. The APS MS 4.0 is rated at 650,000 hours MTBF and is backed by 5-year warranty.

4GB HIGH PERFORMANCE AV

APS MS 4.0AV

- ✓ 7200 rpm mechanism delivers high transfer rates
- ✓ Advanced cache management system
- ✓ Hybrid servo provides superior performance
- ✓ 5-year warranty

JUST \$999⁹⁵

MacUser 7.0
LABS
★★★★



Internal configuration
MICROPOLIS



With sustained reads of over 4MB per second and sustained writes of over 5MB per second, the APS MS 4.0AV is the ideal entry-to-mid level drive for AV use. Its thermal calibration helps prevent data stream interruption.

4GB FAST/WIDE PERFORMANCE CHAMP

APS MS 4.0W

- ✓ Overall highest-performance hard drive
- ✓ Excellent for demanding graphic use
- ✓ 5-year warranty

JUST \$999⁹⁵



Internal configuration
MICROPOLIS



Remarkable speed, that's what you'll get with the APS MS 4.0W. Its 13.7MB/sec. sustained writes make it a perfect match for Photoshop and other powerful graphic applications.

UNBELIEVABLE VALUE - 9GB FOR ONLY

APS MS 9.0

- ✓ Best cost per MB in its class
- ✓ 8669MB formatted capacity
- ✓ Best performance & value in 9GB drives
- ✓ 5-year warranty

\$1899⁹⁵

Internal configuration
MICROPOLIS



The high capacity APS MS 9.0 formats to just under 9GB and has the lowest cost per MB in its class. It supports sustained reads of 3.55MB per second and writes of 5.82MB per second with an access time of 16 ms.

APS HIGH-PERFORMANCE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 4.0	4064MB	★★★★	\$899 ⁹⁵	\$999 ⁹⁵
Micropolis 3243	7200 rpm			
APS Q 4.0	4101MB	★★★★½	899 ⁹⁵	999 ⁹⁵
Quantum Atlas XP34300	7200 rpm			

APS HIGH-PERFORMANCE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 4.0AV	4064MB	★★★★	\$999 ⁹⁵	\$1099 ⁹⁵
Micropolis 3243AV	7200 rpm			
APS MS 9.0	8669MB		1899 ⁹⁵	2099 ⁹⁵ *
Micropolis 1991	5400 rpm			
APS MS 9.0AV	8669MB	★★★★	1999 ⁹⁵	2199 ⁹⁵ *
Micropolis 1991AV	5400 rpm			

APS FAST/WIDE SCSI DRIVES

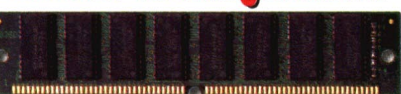
Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0W	1955MB	★★★★	\$649 ⁹⁵	\$749 ⁹⁵
Micropolis 4221W	7200 rpm			
APS MS 2.0WAV	1955MB	★★★★	749 ⁹⁵	849 ⁹⁵
Micropolis 4221WAV	7200 rpm			
APS MS 4.0W	4064MB	★★★★	999 ⁹⁵	1099 ⁹⁵
Micropolis 3243W	7200 rpm			
APS MS 4.0WAV	4064MB	★★★★	1099 ⁹⁵	1199 ⁹⁵
Micropolis 3243WAV	7200 rpm			

- 30-day money-back guarantee on all APS brand products. Your risk is the cost of shipping.
- Drive-for-Drive Repair or Replacement Warranty. APS will, at its discretion, replace or repair products found to be defective according to the terms of the product's warranty.
- Refused orders subject to 20% restocking fee.
- Listed capacities are formatted.
- Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.

- Internal hard drives include brackets, cables, cords and LEDs required for operation with the specified Macintosh where applicable. External SCSI-2 drives come with a premium SCSI cable, power cord and user guide.
- You may need to install system software appropriate to your machine before using our hard drives.
- Prices and specifications are subject to change without notice. Not responsible for typographical errors.
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REALLY FAST BACKUP

GREAT PRICE \$999⁹⁵ External configuration



APS HyperDAT[®] Pro



- ✓ Fastest DAT tape drive available
- ✓ Backup at up to 50MB/minute!
- ✓ Up to 8GB of storage per 120m DAT tape
- ✓ The new performance standard for network backup

With backup speeds as high as 50MB per minute, the APS HyperDAT Pro is the economical way to cut your backup (and restore) window in half. Ideal for server backups that require minimal downtime, the APS HyperDAT Pro uses standard 120m DDS-2 tapes which hold up to 8GB with compression*, and is compatible with all DDS and DDS-DC compliant tapes and mechanisms. **assumes 2:1 compression ratio*

HIGH PERFORMANCE 8X CD-ROM

APS CD8 Pro

GREAT PRICE \$399⁹⁵ External configuration

- ✓ Terrific value
- ✓ Fast 1.2MB/sec. transfer rates
- ✓ 115 ms average access
- ✓ 8X speed provides smoother video output



Take advantage of the high performance 8X CD-ROM speed of the new APS CD8 Pro to supercharge any CD-ROM application. The APS CD8 Pro's 1200KB per second maximum transfer rates in 8X mode provide smoother full-screen video output than earlier generations of CD-ROM drives, and makes it terrific for use with large, complex files. Additionally, the fast average access time of the APS CD8 Pro makes it a great match with interactive multimedia.

HIGH PERFORMANCE 30GB SERVER BACKUP

APS DLT30

\$2999⁹⁵ External configuration

- ✓ Excellent for server backup
- ✓ Great for near-line and online archiving
- ✓ The new standard for backup speed and capacity
- ✓ Holds up to 30GB on a single tape with hardware data compression



Earth-shattering speed and capacity. That's what the APS DLT30 drive is all about. Supporting real-life backup speeds of up to 100MB per minute, as tested in our labs, and capacities up to 30GB on a single tape using hardware data compression, the APS DLT30 is the ultimate solution for anyone needing to backup huge amounts of data quickly. Graphics professionals, MIS directors, and multimedia developers will benefit greatly from the awesome speed and capacity of the APS DLT30.

Jabra for Macintosh

- Turn your Power Mac or AV Quadra into a hands-free telephone workstation
- Comfortable, lightweight earpiece
- Provides clear, consistent audio input and output

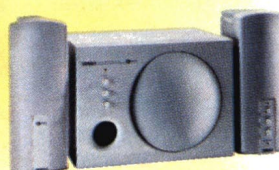


106185

\$139⁹⁵

Yamaha System 45

- Enhances any multimedia application
- Adds thumping, deep bass response to your computer
- Magnetically shielded
- Includes a pair of YST-15 speakers and a thundering subwoofer



106359

\$209⁹⁵

GRAND Vision[®] Mac Wizard

- Send broadcast quality stills and video from your Mac to any TV, television projector or VCR
- Perfect for presentations, video training sessions, sales meetings, and trade shows
- Hardware-only solution



105376

\$299⁹⁵

APS QIC & DAT TAPE BACKUP SYSTEMS

Model	Capacity/Features	Awards	Internal	SR2000
APS HyperQIC [™]	2GB	MacWeek MacUser LABS	N/A	\$499 ⁹⁵
Travan 4 Mechanism				
APS HyperDAT [®]	8GB	Power Matched MacUser LABS	\$849 ⁹⁵	899 ⁹⁵
DDS-2 Compression Mechanism				
APS HyperDAT [®] Pro	8GB	Power Matched MacUser LABS	949 ⁹⁵	999 ⁹⁵
DDS-2 High-Speed Mechanism				

APS DLT TAPE BACKUP SYSTEMS

Model	Capacity/Features	Awards	Full-Height
APS DLT30	30GB	Power Matched MacUser LABS	\$2999 ⁹⁵
Digital Linear Tape Mechanism			
APS DLT40	40GB	MacUser LABS 1995 FINALIST	4999 ⁹⁵
Digital Linear Tape Mechanism			
APS DLT4500	200GB	Power Matched MacUser LABS	8899 ⁹⁵
Digital Linear Tape Loader			

All APS tape drives include Retrospect[®] by Dantz[®]. To receive an automated fax listing of all APS documents, call 800-374-5802 from any touch-tone telephone. Then call 816-920-4150 from a fax machine with a handset or fax modem and follow the instructions.



These products are performance-matched for optimal performance in the PowerPC environment.

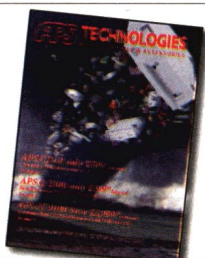
APS MEDIA SALE

IN STOCK

maxell	SALE PRICE	maxell	SALE PRICE
1018-902 4mm DAT Cleaner	\$9.95	60m DAT	\$5.95
1018-112 8mm 112 Cartridge	6.95	90m DAT	9.95
105039 8mm 160 Cartridge	14.95	120m DAT	24.95

SONY	SALE PRICE	3M	SALE PRICE
CD-R 74 Min	\$9.95	650MB PD Cartridge	\$49.95
CD-R 74 Min 10pk	89.95	2.6GB MO	99.95

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NOW JUST **\$599⁹⁵** External configuration

APS CD-R

- ✓ Uses CD media with 100-year shelf life
- ✓ Random access gives you fast retrieval
- ✓ Supports variable and fixed packet writing

At the lowest price ever for Sony 2x by 2x CD-R technology, the APS CD-R is a fantastic value for authoring, mastering or backing up to CDs. CD-R media costs less than 2¢ per MB and has an estimated 100-year shelf life. The APS CD-R is based on Sony's CDU-920S mechanism with its giant 1MB cache buffer, and supports packet writing and all popular CD formats specified in the Orange Book Part II. The APS CD-R comes with a FREE copy of Discribe CD recording software and it can be used with Retrospect as a backup device.

650MB OPTICAL & 4X CD-ROM AT ONE LOW PRICE

APS PD4

- ✓ Combines removable optical storage and backup with CD-ROM in one device!
- ✓ Accepts 650MB rewritable optical cartridges and CD-ROMs interchangeably

GREAT PRICE

\$499⁹⁵ External configuration

The new APS PD4 is the most versatile drive available for your Mac. Combining a fast 4X CD-ROM player with rewritable 650MB optical cartridge drive, the APS PD4 saves a SCSI address while performing these two important desktop functions.

THE ULTIMATE CD-R MASTERING SYSTEM

APS CD-R Mastering System 2.0

- ✓ High-performance 4X CD-R drive & high-performance 2GB AV drive
- ✓ Free copy of TOAST CD-ROM Pro - a \$500 value

\$2499⁹⁵ External configuration



The ultimate goal when burning CD-R media is a successful burn on the first try, minimizing wasted media, and our new high-performance CD-R Mastering System helps you meet that goal. Combined in a single full-height enclosure, you'll find a high-performance 4X/4X CD-R drive and 2GB of high-performance AV storage. You'll also receive a FREE copy of TOAST CD-ROM Pro recording software - a \$500 value - to complete the task.

Kodak Digital Science DC50 Zoom Camera

- 3X zoom and close-up
- 756 x 504 pixel resolution in 24-bit color
- Holds up to 22 photos with compression, or 7 high-resolution images,
- Optional 4MB PCMCIA card holds even more images

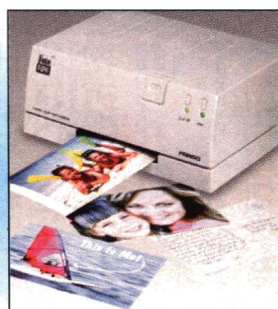


105388

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- Full color output from digital images
- Includes a print film kit and color matching software
- Print full color photos, postcards, and mugs* right from your Mac



106249

\$489⁹⁵

*With optional photo mug kit

UMAX PageOffice

- Document feeder holds up to 10 pages
- Fax, E-mail, edit, file or print scanned pages
- Includes OCR software and uses a SCSI interface



105304

\$289⁹⁵

APS CD DRIVES

Model	Features	External
APS CD8 Pro	8X-SPEED Data transfer rates up to 1200KB per second!	\$399 ⁹⁵
APS PD4	CD-ROM/Removable Optical 650MB optical storage with 4X CD-ROM in one device	499 ⁹⁵ *
APS CD-R	Recordable CD-ROM FREE Discribe CD recording software (\$350 value)	599 ⁹⁵ *
APS CD-R Plus	Recordable CD-ROM FREE TOAST CD-ROM Pro recording software (\$500 value)	899 ⁹⁵ *
APS CD-R Pro	4X4 Performance CD-R FREE TOAST CD-ROM Pro recording software (\$500 value)	1799 ⁹⁵ *
APS CD-R Mastering System 2.0	4X read/4X write recording engine and a 2GB AV scratch disk	2499 ⁹⁵ *
APS CD-R Mastering System 4.0	4X read/4X write recording engine and a 4GB AV scratch disk	2999 ⁹⁵ *

APS MO DRIVES

Model	Capacity/Features	Awards	SR2000
APS 230 MO	230MB 4500 rpm drive/230MB	LABS 4.5	\$449 ⁹⁵
APS PD4	CD-ROM/Removable Optical 650MB optical storage with 4X CD-ROM in one device		499 ⁹⁵ *
APS 2.6GB MO	2.6GB 4MB cache/2.6GB Uses 2.6GB cartridges or 1.3GB cartridges	LABS 4.5	1799 ⁹⁵

- 30-day money-back guarantee on all APS brand products. Your risk is the cost of shipping.
- Drive-for-Drive Repair or Replacement Warranty. APS will, at its discretion, replace or repair products found to be defective according to the terms of the product's warranty.
- Refused orders subject to 20% restocking fee.
- Listed capacities are formatted.
- Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.
- Internal hard drives include brackets, cables, cords and LEDs required for operation with the specified Macintosh where applicable. External SCSI-2 drives come with a premium SCSI cable, power cord and user guide.
- You may need to install system software appropriate to your machine before using our hard drives.
- Prices and specifications are subject to change without notice. Not responsible for typographical errors.
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APS SYQUEST DRIVES

Model	Capacity/Feature	Awards	SR 1000	SR2000
APS SQ 5200	194MB Compatible with 200, 88 and 44MB cartridges	LABS 4.5	N/A	\$349 ⁹⁵
APS M540	500MB Compatible with SyQuest 270 & EZ 135 cartridges		\$399 ⁹⁵	499 ⁹⁵



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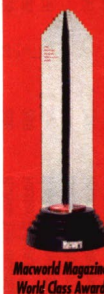
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Video Card		Monitor (Colors)				Video Card		Monitor (Colors)				Video Card		Monitor (Colors)			
	Platform	14/15"	16/17"	19/20"	21"		Platform	14/15"	16/17"	19/20"	21"		Platform	14/15"	16/17"	19/20"	21"
Radius FPD Card	Mac Plus	Mono	—	—	—	Radius FPD Card	Mac SE	Mono	—	—	—	Double Color SX	Nubus	256	256	16	—
Radius Pivot Card	SE/30	256	—	—	—	SuperMac Superview	Mac SE	—	—	Mono	—	RasterOps 708+	Nubus	256	—	256	—
Xceed Color 30hr	SE/30	256	256	256	256	Radius TPD Interface	Mac SE	—	—	—	Mono	RasterOps 24L	Nubus	Millions	—	—	—
Lapis Color 16	SE/30	Thousands	Thousands	256	256	RasterOps 8/LC	LC/PDS	—	—	256	—	RasterOps 8/LC	Nubus	—	—	256	—
Lapis Color 24	SE/30	Millions	Millions	256	256	SuperMac Spectrum 8	LC/PDS	256	256	256	256	SuperMac Spectrum 8	Nubus	256	256	256	—
Radius Direct Color/gx	lsl	Millions	—	—	—	Lapis Color 16 for LC	LC/PDS	Thousands	Thousands	256	256	Double Color LX	Nubus	256	256	256	256
SuperMac Spectrum 8	lsl	256	256	256	256	Micro Conversions 1724	LC/PDS	Millions	Millions	256	256	Radius Direct Color 24	Nubus	—	—	—	Millions
SuperMac Spectrum 8.24	lsl	Millions	256	256	256	Lapis Color 24 for LC	LC/PDS	Millions	Millions	256	256	E-machines Futura MX	Nubus	Millions	Millions	Millions	—

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- IBM RS 6000

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• 8 ms Seek • 7200 RPM
• 512K Buffer • 5 Year War.

• MR Head Technology

All drives come preformatted with FWB for Maximum performance in AV and DTP environments.

\$525 INTERNAL **\$585** EXTERNAL

4.2 GB ULTRA

• 8ms Seek • 7200 RPM
• 512K Buffer • 5 Year War.

• MR Head Technology

All drives come preformatted with FWB for Maximum performance in AV and DTP environments.

\$845 INTERNAL **\$905** EXTERNAL

Featured Products

Quantum

	Internal	External
270 MB Maverick	\$119	\$179
14 ms Seek 3600 RPM 128K Buffer 2 Year Warranty		
535 MB Performance!	165	225
9 ms Seek 5400 RPM 512K Buffer 5 Year Warranty		
850 MB Value!	185	245
11 ms Seek 4500 RPM 128K Buffer 3 Year Warranty		
1070 MB Atlas New Product!	279	339
8 ms Seek 7200 RPM 1024K Buffer 5 Year Warranty		
1280 MB Fireball II	259	319
11 ms Seek 5400 RPM 128K Buffer 5 Year Warranty		
2.2 GB Saturn	469	529
8.5 ms Seek 5400 RPM 1024K Buffer 5 Year Warranty		
2.0 GB Atlas New Low Price!	629	689
8 ms Seek 7200 RPM 1024K Buffer 5 Year Warranty		
4.3 GB Atlas	885	945
8 ms Seek 7200 RPM 2048K Buffer 5 Year Warranty		
Fast & Wide SCSI AV Drives		
2.0 GB ATLAS	675	775
8 ms Seek 7200 RPM 1024K Buffer 5 Year Warranty		
4.2 GB ATLAS	975	1075

CONNER

2.1 GB Fast AV Performance!	695	755
8 ms Seek 7200 RPM 512K Buffer 5 Year Warranty		
2.1 GB Fast & Wide - AV Performance	725	785
8 ms Seek 7200 RPM 512K Buffer 5 Year Warranty		
4.2 GB Fast AV Performance!	975	1035
8 ms Seek 7200 RPM 512K Buffer 5 Year Warranty		
4.2 GB Fast & Wide - AV Performance	1075	1175
8 ms Seek 7200 RPM 512K Buffer 5 Year Warranty		

MICROPOLIS

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135MB	SQEZ135	195	88 MB	44
200 MB	SQ5200	325	135 MB	19
270 MB	SQ3270	339	200 MB	69

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Fast/Wide 16BIT SCSI 2 accelerator card for Apple's Nubus based computers. Supports fast/wide SCSI 2 (16 Bit) transfer rates up to 20MB/sec. and fast SCSI 2 (8 Bit) transfer rates up to 10 MB/sec.

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S198 1013	105MB	\$35 ^{ea}	\$34 ^{50ea}	\$34 ^{ea}
S198 1014	270MB	\$57 ^{ea}	\$56 ^{ea}	\$55 ^{ea}
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2150MB	Atlas 8ms	C104 0004	\$639	C104 0054	\$699
4280MB	Atlas 8ms	C104 0005	\$899	C104 0055	\$959

1280MB	Fireball IDE	C104 0012	\$229
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NEC

Access time	Trans Rate
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R016 1032

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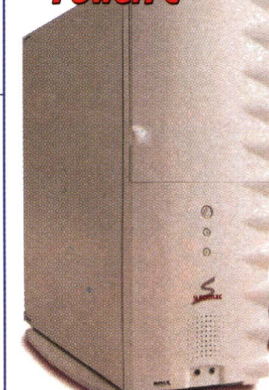
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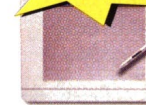
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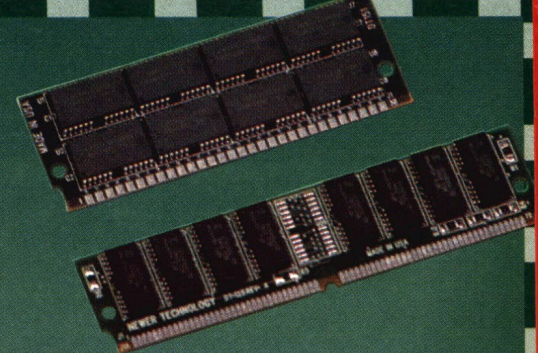
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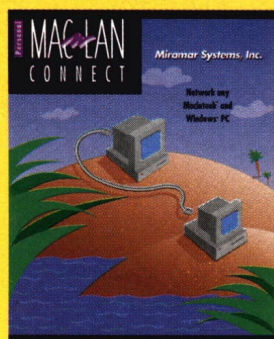
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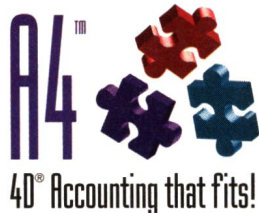
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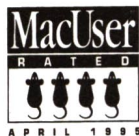


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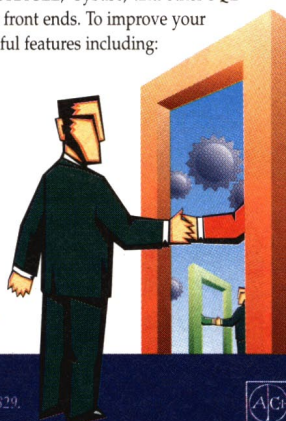
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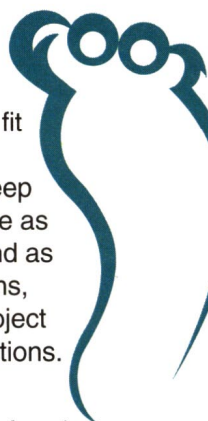


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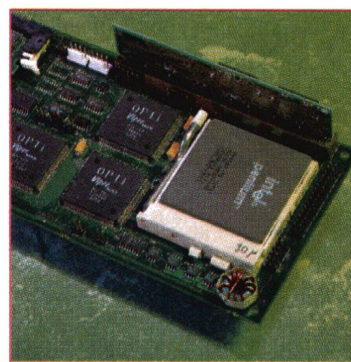
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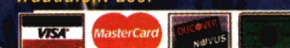
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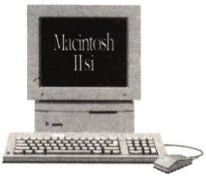
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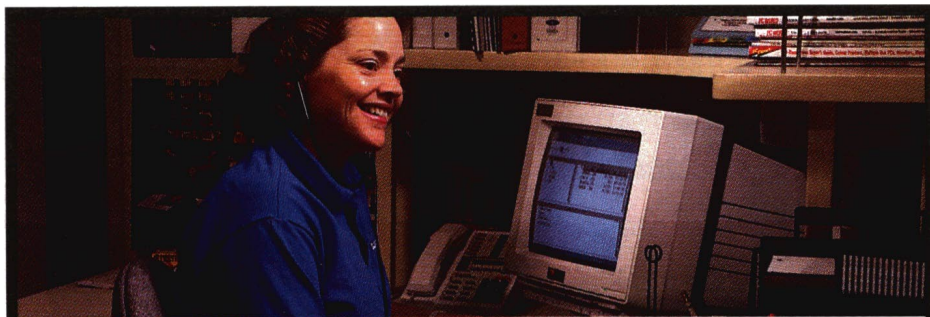
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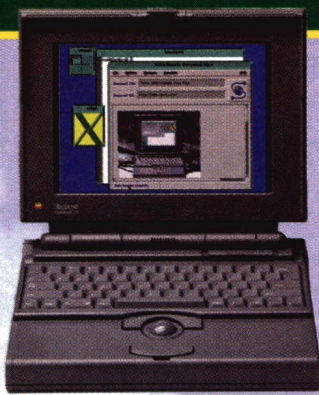


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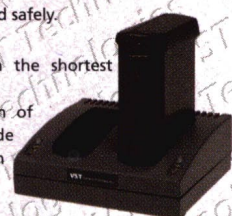


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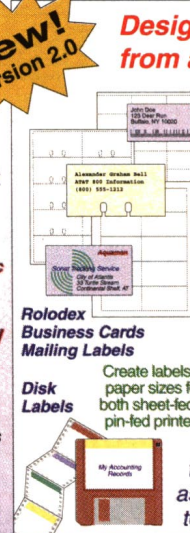
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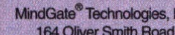
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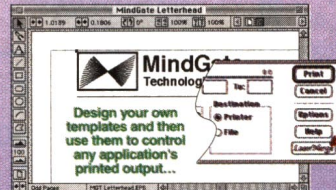
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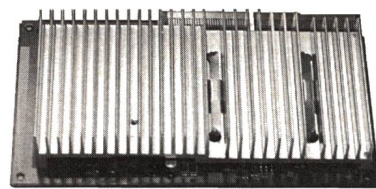
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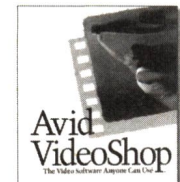
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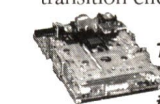


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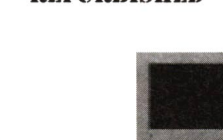
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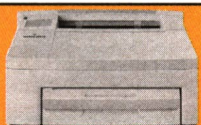
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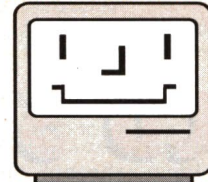
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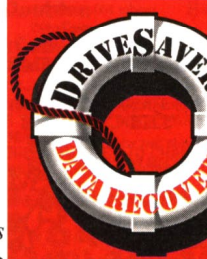
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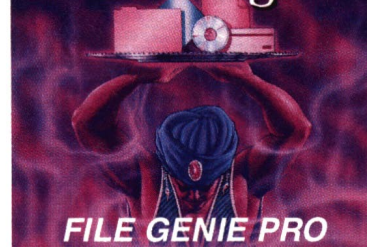
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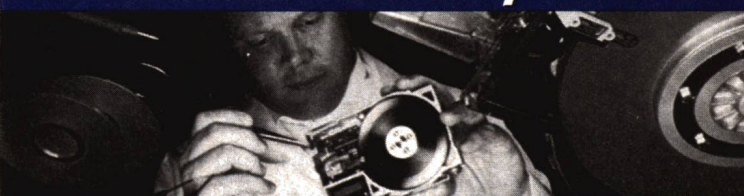
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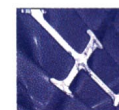
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Landi

From Page 1

generate profits, quality and customer loyalty.

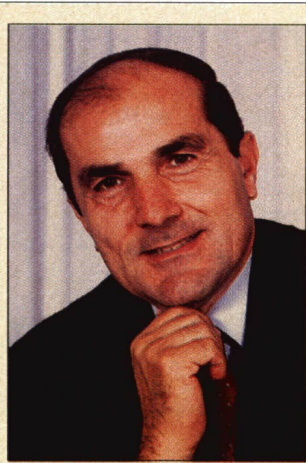
"You cannot invent, every two or three years, the next insanely great product — you cannot do it," he said. "We need to ask ourselves why our customer needs to buy, in two years, our products. Why?"

Landi said he wants the answer to come from across Apple; the entire organization should be focused on generating value. "We need to make sure we have a process that is looking at how we can provide user value that will make us different, that will rebuild that Apple magic," he said. "I want everybody to say [that] if we can bring that distinctly superior user value, then we bring the product out. Otherwise, no."

Today, he said, the company's efforts are diluted by its wide scope. "We are doing too many things, too many. We cannot continue to do that," he said.

Landi predicted future products will draw their value from a familiar well. "Ease of use in Apple has probably been the distinctly superior user value. Can we now say that we have a major gap vs. our competitors? Still there is the gap, but the gap is closing," Landi said. "And we need to tell you that, because if we are too much arrogant, then we lose the sense of reality."

The new COO had a harsh reality check for several current products. "Do you think the Newton is offering distinctly superior user



Apple "reached \$12 billion with no discipline, with no business processes, with no quality management — I mean, it's magic! But it will not continue like that; it cannot."

— Marco Landi

value? No." On recent PowerBooks: "We screwed up, clearly."

Landi said Apple can achieve DSUV by turning its ease-of-use skills to the global Internet. "I think this is where Apple could really bring a distinctively superior user value — that could be ease of access, ease of navigation into the Internet.

"Who can do that? That is something that must be done [by] coordinating the efforts of the entire organization."

During the interview, Landi seemed more animated by Apple's

internal organizational issues than by the company's technology.

A large organization such as Apple must have clearer business processes than it does today, he said. Apple "reached \$12 billion with no discipline, with no business processes, with no quality management — I mean, it's magic!" Landi said. "But it will not continue like that; it cannot."

The new COO contended that an infusion of performance measurement, accountability and responsibility into Apple operations will free up the inventiveness of employees. "When the people are confused, when the people are uncertain, you kill the creativity," he said. And at Apple, when creative urges are blocked, top engineers leave for competitors. "They just cross the road, and they can find another job. That's the reason I want to bring back some of the people. Because some of the talents, I need them," Landi said.

Indeed, while DSUV is the fruit, the people inside Apple are the root of Landi's business philosophy. "That is my golden circle," he said.

"Satisfied people can make satisfied customers. Because only satisfied customers give you the possibility to make satisfied shareholders. There is no other way." □



For more on Landi's business philosophy and his history as a "global manager," see MacWEEK Online.

Strategy

From Page 1

Apple has also re-evaluated the computer market now that the dust has settled following the release of Windows 95 last year.

"While we are accustomed to regarding our products as superior in a number of ways to Intel machines, we must face the fact that for many routine tasks in the hands of routine users, the two types of personal computers have become largely indistinguishable," wrote the document's authors.

Executives said Apple will seek to identify tasks for which it can offer "distinctly superior user value." The company will then target specific markets that it believes will pay more for this added value (see story, Page 1).

This strategy also marks a frank retreat from Apple's previous attempts to gain greater market share. Instead, Apple executives recently said, the company will stress increasing profits and distinguishing its products, rather than seeking to expand in commodity markets.

At a recent briefing in New York, Apple Chief Operating Officer Marco Landi said the company will measure every hardware and software product by its contribution to the bottom line (see 06.24.96, Page 1). "Our entire structure will push profit," he said.

The shift in strategy reportedly spells out expectations for Apple's new profit-and-loss centers: Macintosh, Alternative Platforms, Information Appliances and Imaging. Sources said the plan seeks to make both hardware and software products as competitive as possible.

Seeming to break with Apple's history of hardware and software integration, the document reveals that hardware and system software groups are expected to develop products and features without depending on each other to provide competitive advantages. Previously the operations relied too strongly on the other's reputation for quality, rather than standing on their own, an Apple insider said.

The plan also offers a glimpse at possible new directions for the Mac OS and a redefinition of cross-platform compatibility. The white paper implies that the OS should support Windows applications directly, instead of requiring a separate emulation application or hardware coprocessor card.

In addition, echoing the strategy used for Pippin, sources said Apple intends to find new venues

for subsets of the Mac OS, which they call "extractions." The OS extractions will play on future pint-size platforms for Internet and education markets.

The plan expands on recent management sentiments that Apple cannot provide the same level of support for every market. Instead, products for each market segment will be scrutinized, and each product's status will depend on a cost justification based on either marketing or R&D expenses.

The company will target its strongest markets: digital media authoring, publishing, scientific and technical, and education. It also sees small-office, home-office users fitting into these core markets.

However, Apple's new plan will "sustain" large enterprise accounts, providing newsletters and online information as well as support for enterprise distribution channels. Macs will not go head-to-head on price against competing commodity systems with similar features and performance. In addition, any new initiatives will reportedly require a gross margin greater than 25 percent.

The new strategy also reflects changes in Apple's marketing in different geographical markets. While executives recently said the company needs to extend its international scope, sources said Apple will focus its primary efforts in regions where it enjoys strong sales: the United States, Australia, Canada, France, Germany, Japan and the United Kingdom. Apple will leverage its infrastructure in these regions.

In addition, sources said the company will focus its resources at a few emerging markets with above-average growth rates, such as Brazil, China and India. These locales are the focus of Mac OS licensing activity by Apple, IBM Corp. and Motorola Inc. (see 02.26.96, Page 1).

In other countries, which have smaller projected growth rates and provide less than 1 percent of the company's worldwide business, Apple will focus on return on investment rather than growing the market.

However, many of the plan's fine points are still unsettled. According to insiders, Apple CEO Gil Amelio recently charged several task forces to detail further options and time lines for previously unplanned OS enhancements; specific added-value technologies and markets; and further cash-saving schemes, such as outsourcing of manufacturing.

Apple declined to comment. □

Apple names new R&D leader

By Clifford Colby

Ending months of speculation about who will guide Apple's technology, the company last week named Ellen Hancock executive vice president of research and development and chief technology officer.

Hancock, who starts July 8, fills the top R&D position vacated by David Nagel. Nagel left Apple in late April to become president of AT&T Laboratories, a division of AT&T Corp.

Hancock, 53, will report to Apple CEO Gilbert Amelio, a fellow National Semiconductor Corp. alumnus. Charged with driving Apple technologies, Hancock will oversee the AppleSoft division, which develops the Mac OS; the Apple Research Laboratories, a technology think tank; the AppleNet division, which develops Internet technologies; and the Reliability and Quality As-

surance group.

Hancock comes to Apple after eight months at National Semiconductor of Santa Clara, Calif., where she served as executive vice president and chief operating officer and worked with National Semiconductor's then-CEO Amelio. She was part of the three-person office of the president that ran National Semiconductor after Amelio left the company to head Apple. Hancock resigned from the company in May.

Before National Semiconductor, Hancock spent 29 years at IBM Corp. of Armonk, N.Y.

Hancock joined IBM in 1966

as a programmer and held various positions, including senior vice president and group executive responsible for the company's

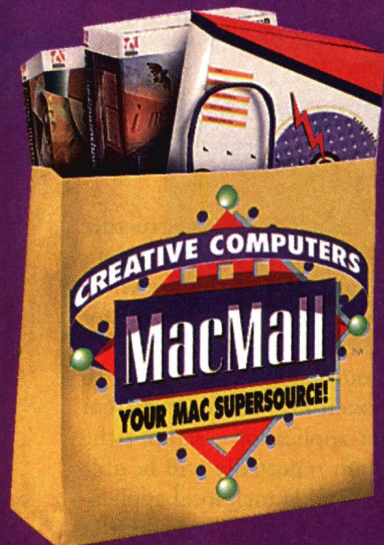
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According to a prepared statement from Amelio, "Ellen Hancock's expertise in leading-edge technologies and software development — from visionary assessment to successful implementation — as well as

her strong leadership qualities, will keep Apple at the forefront of technology innovation and key industry trends." □



Ellen Hancock is Apple's new chief technology officer.



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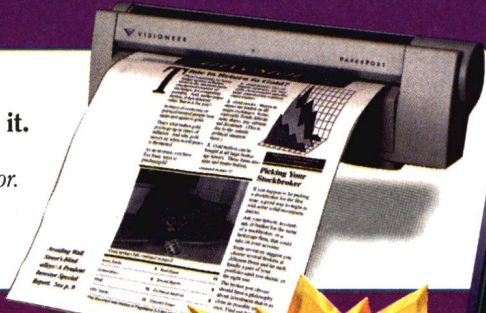
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Netscape

From Page 1

is adding tools so Web developers can create collaborative applications based on the company's browser and its editing companion, Navigator Gold.

► **Interface design.** Most dramatic of the enhancements will be new HTML layout tags that open multiple browser windows at once. For example, a stock quote site could open a small window at the top of the screen with a running ticker, a square window that graphs stock movements and a text-page window with the latest news from Wall Street. Users would be able to resize and reposition each window independently.

Navigator 4.0 is also expected to introduce a new type of frame that can lay on top of other frames and appear without borders or scroll bars. Sources said these features will let designers stack page elements, such as a text-only frame overlaying one that contains a picture or digital video. Removing a frame's borders and scroll bars will create an appearance similar to the more-familiar tables, sources said.

Online forms will also reportedly gain basic computation and validation capabilities, such as adding data from two or more fields and presenting a total before sending the numbers to a server.

A Java just-in-time compiler will arrive for the Mac with Version 4.0, sources said, along with class libraries for building custom Java interfaces to Navigator itself or Web documents viewable through it. In addition, the font-selection tag introduced by Microsoft Corp. will be supported, letting designers specify fonts by name (see 04.15.96, Page 12).

One more Nav 3.0 beta

Before users get their hands on Netscape Navigator 4.0, another beta release of Navigator 3.0 will arrive this month followed by the final version in August.

On the Mac, beta 5 will deliver CoolTalk, a full-duplex, voice-telephony tool that will let users converse over the Internet. It will feature a speed dialer, phone book, answering machine, and support for call-screening and Caller ID.

LiveChat, the Internet Relay Chat client delivered in an earlier beta, will gain the ability to share whiteboards for conferencing.

Netscape Communications Corp. plans to deliver a Java just-in-time (JIT) compiler in

the next beta for Microsoft Windows. However, the company reportedly has not licensed a JIT for the Mac. As a result, sources said, a Java JIT will not be part of Mac Navigator 3.0.

The retail package of Navigator 3.0 will ship with a new version of a Mac dial-up kit for configuring modem connections to the Internet. Sources said the company will also ship for Version 3.0 an Administration Toolkit that will let managers set and lock preferences, such as proxy servers, for all Navigator browsers on a LAN. The tool kit will also generate preconfigured copies of Navigator, sources said. — *By James Staten*

► **E-mail.** According to sources, Navigator's built-in e-mail will let users read and compose messages when not connected to the Internet. The program will also let users filter and reply automatically to mail and discussion-group messages.

Netscape will reportedly add full drag-and-drop text editing, and users will be able to put complex HTML, including tables and images, into the bodies of messages. The addition of S/MIME (Secure/Multipurpose Internet Mail Extensions) will let users trade encrypted e-mail, while IMAP4 (Internet Message Access Protocol Version 4) will let Navigator users maintain offline and online mailboxes that are synchronized automatically.

Online full-text searching will work with mail and discussion

groups, sources said, and the built-in address book will use LDAP (Lightweight Directory Access Protocol). Common to Windows NT and Unix mail servers and groupware products, LDAP synchronizes local address books with server directories.

► **Components.** Sources said Netscape sees the move to component software as critical to reducing Navigator's RAM and hard disk requirements. On the Mac, OpenDoc is the only solution being considered.

The company reportedly will create a version of Navigator that is an OpenDoc part; sources said Apple plans to bundle it with Cyberdog. The Navigator plug-in architecture will be accessible through this part, letting all OpenDoc components inter-

operate with Netscape plug-ins.

On Windows, however, Netscape's technology path is less clear. Sources said the company is considering Microsoft Corp.'s OLE but is not entirely pleased with it. Netscape reportedly is even less pleased — and skeptical — about IBM Corp.'s efforts to port OpenDoc to Windows.

Sources said Navigator's own plug-in architecture will be greatly improved. Instead of having to locate and install plug-ins manually, Version 4.0 will automatically find, download and install plug-ins when needed.

► **File handling.** Within each client's main Navigator 4.0 folder, the browser will create a series of folders to organize the various types of content encountered while browsing, sources said. These contents will include cached Web files plus data stored on the client by Internet or intranet applications. Users reportedly will be able to reorganize local Navigator data in ways that make more sense to them.

A new security layer will sur-

round this local folder structure to prevent network applications from accessing files elsewhere on a user's hard drive. Navigator itself, however, will be able to look outside of its hierarchy. In an extension of the current helper-application setup, the program reportedly will be able to find and launch local applications needed to view or edit files sent over the Internet, even when the file types and applications are not predefined.

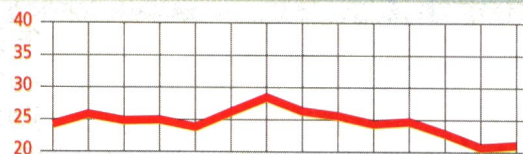
► **Administration.** During the Navigator 4.0 beta cycle, Netscape is expected to release an updated Navigator Administration Toolkit that will add a Java-based development environment for the browser. This will let managers fully customize the application, creating new interfaces and building client-server intranet applications.

The tool kit will also let managers create centrally stored settings for Navigator, which all clients on a network will be able to access on start-up, sources said. Netscape declined to comment. □

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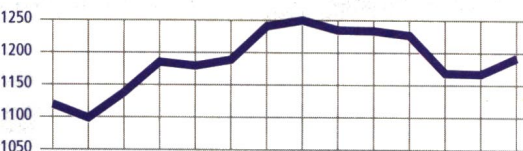
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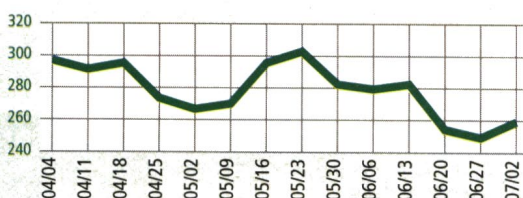
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Mathematica From Page 1

improvement is Version 3.0's ability to support mathematical typography, which allows the use of traditional mathematical notation for both input and output. "It's no longer a command-line environment," Warner said.

Beta tester Flip Phillips concurred. "I was always cutting and pasting from [Adobe Systems Inc.'s] FrameMaker for typesetting, but now I can take equations right out of Mathematica and stick them in my manuscripts," said Phillips, a research scientist in the psychology department at Ohio State University in Columbus.

Version 3.0 will also let users create custom palettes of functions and formulas. It will support HTML links between docu-

ments and other Internet resources, the company said.

The update will expand Mathematica's computational capabilities with an additional 250 new functions. The software is the first to calculate symbolic integrals, the company said. "Now it can do them better than human integrators," Wolfram said.

Most calculations in Version 3.0 will run 10 to 20 times faster, Wolfram said. The update will optimize numeric matrix operation and improve memory handling for kernel operations. It also provides for platform-independent I/O of numeric data without loss of precision. In addition, the new version will beef up Mathematica's graphics capabilities. It will support automatic conversion of several graphics formats, including

EPS, TIFF and GIF, the company said. It will provide more than 700 special characters for mathematical notation as well as Unicode support.

The update will also offer a new platform-independent file format as well as let users convert notebook files to HTML and TeX formats. It will come with a 1,400-page hardcover book and numerous example programs. Version 3.0 will cost \$1,295 or \$795 with an academic discount. Version 2.2 costs \$995; users who purchase the software in July will receive a free upgrade, the company said.

Wolfram Research Inc. of Champaign, Ill., is at (217) 398-0700 or (800) 441-6284; fax (217) 398-0747; info@wolfram.com; http://www.wolfram.com. □

	07.02.96 CLOSE	WEEKLY CHANGE		07.02.96 CLOSE	WEEKLY CHANGE
Apple	21.00	0.38	PERIPHERALS VENDORS		
MacWEEK			AmeriQuest	0.88	-0.06
Composite*	258.78	10.01	Asanté	6.88	-0.13
SOFTWARE DEVELOPERS			Focus	2.69	0.13
Adobe	36.06	0.75	Global Village	9.38	0.38
Caere	11.75	0.13	HP	97.50	-1.38
CE Software	1.75	-0.13	QMS	5.75	0.13
Fractal	14.75	0.50	Radius	2.69	-0.31
Graphsoft	7.75	0.13	Shiva	83.63	6.88
Insignia	7.88	-0.75	Tektronix	43.00	-0.25
Intuit	48.75	3.50	Truevision	7.38	-0.19
Macromedia	21.38	-1.00	DISTRIBUTORS		
Microsoft	121.63	1.69	CompUSA	37.75	1.63
Novell	13.94	0.25	IE	9.50	1.25
Oracle	38.25	-1.25	Merisel	3.19	-0.88
Symantec	12.00	0.00	Tech Data	21.25	0.13
STORAGE			INDUSTRY INDICATORS		
Iomega	28.25	0.75	Compaq	49.75	0.75
Pinnacle	8.50	-0.38	IBM	100.00	1.13
Quantum	14.44	0.31	Intel	74.75	0.88
Seagate	46.50	2.50	Motorola	64.75	2.25
SyQuest	8.13	-0.25	SGI	25.25	1.00
			NASDAQ	1191.15	25.14

*The MacWEEK Composite is calculated by adding the stock prices of the following companies: Apple, Adobe, Asanté, Caere, CE Software, Global Village, Intuit, Macromedia, Radius, Shiva, SyQuest and Truevision. Source: Nordby International Inc.

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Mariner

From Page 1

It will be fully Apple-events scriptable, provide extensive Apple Guide help and feature a built-in spelling checker. Mariner Write will also include drag-and-drop text-editing capabilities.

True to its international origins, Mariner Write will support WorldScript for creating foreign-language documents.

"It's so clean, crisp and fast," said Linda McNeil, media specialist at Valley Forge (Pa.) Middle School. "It opens a 24-page document before you can blink."

McNeil, who beta tested the application, said she was impressed by a unique command that sets a document's margins based on the maximum print area for the user's selected printer.

"It's a pleasant surprise compared to all the complex and cluttered programs that are out there," McNeil said. She added that Mariner Write's quick load time is another significant plus.

Beta tester Sandra Foderick, a graduate teaching assistant in English at St. Cloud (Minn.) State University, said Mariner Write compares favorably to the word processor in ClarisWorks but is no match for Microsoft Word. "It doesn't create tables, but I could do things with it that I couldn't do with ClarisWorks," she said.

Mariner Write will gain an associate by the end of 1996. The company plans to pair the word processor with a new version of its spreadsheet, currently sold in Japan as Mariner-J. It is based on the Mariner shareware application already available in the United States.

The company declined to detail the feature set or price for the spreadsheet, but said the application will receive a "major face lift" and "provide three-fourths of the features from Excel for one-fourth the price."

The company said the spreadsheet will be fully compatible with Mariner Write and let users move data between the two applications. In addition, Mariner said the spreadsheet will provide graphing capabilities and drawing tools as well as mail-merge capabilities.

Foderick said she feels Mariner Write will find success because of its ease of use and low system requirements. "A lot of people don't want a lot of complexity; this is perfect for them," she said.

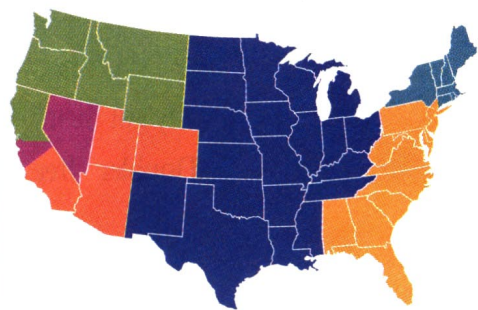
Mariner Software Inc. of La-Grange, Ky., can be reached at (502) 222-6695; fax (502) 222-8283; mariner@marinersoft.com; <http://www.marinersoft.com>. □

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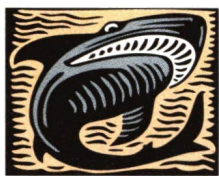
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The Knife takes a holiday

MacWEEK is racing to press two days early this week, the better to enjoy a long weekend honoring the Glorious Fourth. Meanwhile, everyone's fave gay blade has concocted his own high-tech salute to our nation's independence.

Forget those illicit pyrotechnics smuggled in from Mexico, South Carolina and other developing Third World nations: The Knife trusts that his cache of PowerBook 5300s, vintage Technoggin batteries, copies of Soft-RAM95 and other incendiary devices will fan the flames of liberty, Silicon Valley-style.

Oh, Shay, can you shee?

While the Knife prepares his own fireworks, Apple's brand-spanking-new Information Appliances Division is busy running something fresh up the flagpole: a stylish mutant Newton aimed at the education crowd.

This creative plaything, code-named Shay, will sport a rugged clamshell case with a New Wave leopard-skin design; it will contain a monitor and keyboard as well as accommodate the tried-and-true Newton stylus. Shay will run on Digital's StrongARM chip and street out at less than a grand.

Recalling his own rambunctious school days, the Knife must wonder how many of these postmodern Apple IIe models are going to share space with those confiscated GameBoys languishing in Teacher's desk drawer.

And while we're on the subject of absurd grade-school pranks: The Knife is amused to report that some retro souls from the former Apple II DTS team are hard at work on a IIGS emulator designed to run native on Power Macs as well as 680x0-based boxes. Apparently, Apple hopes the all-software emulator, code-named Gus, will win over any benighted school districts still running Apple, Toos.

(Curious? You won't be after you check out the IIGS historical society at <http://www.cs.csubak.edu/~jstiles/emulator/apple2/index.html>. The Knife sez: "Shwing-o-riffic!")

From C to shining C

While Apple's *samizdat* effort is whipping IIGS partisans into a patriotic frenzy, Symantec seems to be retreating from the Mac camp faster than the embattled Dolly Madison fled the White House, a supply of tasty snack cakes stowed securely in her bustle.

For starters, rumors are spreading like wildfire that Symantec is dropping its venerable Suitcase font utility quicker than a lit M-80. While the eventual release of Copland may make Suitcase and its ilk obsolete, the Knife expects that some Mac users will continue to carry a torch for this brand of font management. Happily, ATM Deluxe 4.0 — now playing in beta 6 — is waiting in the wings to secure the blessings of liberty for all Mac-kind.

On the fax front, Symantec has reportedly thrown cold water onto future development plans for the Mac version of Delrina Fax Pro. Volunteer firefighters stationed in Cupertino, Calif., maintain that the flame beneath Fax Pro for the Mac has sputtered badly ever since Symantec acquired Delrina, prompting a mass exodus of Delrina veterans.

Meanwhile, the implosion of Symantec's Macintosh Tools Group makes the Fax Pro departures look like a bottle rocket in a wet paper bag. According to observers cowering outside the line of fire, recent casualties include the department head; the technical director; the chief of marketing; and all but two of the engineers working out of the company's Bedford, Mass., offices.

Needless to say, these recent developments don't bode well for Symantec's C-language products. However, the Knife takes comfort in the thought that the dwindling supply of Mac programming tools may help spur on that long-awaited IIGS renaissance. □

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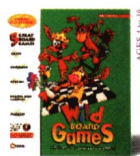
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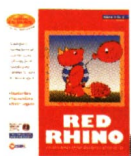
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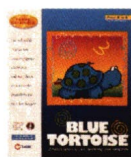
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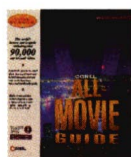
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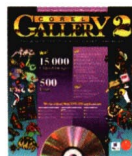
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